

WORLD ARCHAEOLOGICAL CONGRESS
CULTURAL HERITAGE MANUAL SERIES

A wide-brimmed hat, possibly a boater or a similar style, is shown from a high angle. It is resting on a red surface that has a wavy, sand-like texture. The hat is light-colored, and its shadow is cast to the right. The background is a solid red color.

Claire Smith
Heather Burke

Digging It Up Down Under

A Practical Guide to Doing
Archaeology in Australia

 Springer

Digging It Up Down Under

WORLD ARCHAEOLOGICAL CONGRESS CULTURAL
HERITAGE MANUAL SERIES

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DIGGING IT UP DOWN UNDER: A PRACTICAL GUIDE TO DOING
ARCHAEOLOGY IN AUSTRALIA

Claire Smith and Heather Burke

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A Practical Guide to Doing Archaeology in Australia

Claire Smith and Heather Burke

Department of Archaeology, Flinders University,
Adelaide, Australia

Published in conjunction with the World Archaeological
Congress

 Springer



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UNDEDICATION

As usual, this book is not dedicated
to Jo Smith or Robyn Walmsley

Foreword

Digging it up Down Under is the first book in a new series of *Global Cultural Heritage Manuals* being published by Springer. The aim of this series is to provide the essential information needed to conduct archaeological fieldwork in various parts of the world. This series of hands-on field manuals have been written for both undergraduate and graduate students, and for emerging professionals. Each book constitutes a step-by-step guide to undertaking and successfully completing cultural heritage fieldwork in a particular country or region.

The *Global Cultural Heritage Manuals Series* fills the need for a cohesive series of regional field manuals for archaeologists. While there are a number of useful books that provide an introduction to archaeological techniques, these books tend to focus primarily on conditions in North America or Britain, and this makes them of limited value to archaeologists working in other parts of the world.

The *Global Cultural Heritage Manuals Series* fills this gap, not only through providing information specifically crafted to the ethical, legislative and environmental conditions of each region or country, but also by providing the detailed advice on the complex process of undertaking archaeological fieldwork in different parts of the world. The books in this series are structured so they guide practitioners through the entire archaeological process, from research design and obtaining funding, visas and permissions, to site recording, analysis, report writing and other forms of publication. In addition, these books are written to give a sense of what it is like to live in these countries, and to provide an introduction to national lifestyles and the character of specific archaeological communities. In Australia, for example, the archaeological community is relatively small—around 550—and this makes for quite different dynamics to those in countries such as the USA or Japan, which have much larger archaeological communities.

Perhaps archaeology's greatest strength—and its greatest weakness—is that it can be undertaken throughout the world. From one point of view, if you can do archaeology in one country, you can do it anywhere. But, of course, this view is simplistic, as the way in which archaeology is conducted in different parts of the world can vary greatly. Certainly, legislative frameworks and ethical requirements vary enormously, as do the political contexts within which archaeology is conducted. Even basic techniques can vary according to region and if you're not from

a particular area it can be a difficult business working your way through the local systems. Sometimes, even getting access to museum collections can seem like a huge challenge. This series will help archaeologists to address such challenges, as the authors are local archaeologists who understand the legislative, policy and ethical requirements of archaeological fieldwork, as well as the international context and constraints of culture heritage practices in their part of the world. As a result, the complete set of manuals in this *Series*, tackling a range of coherently spelled out issues, will provide the archaeological community worldwide with a competent overview of issues that structure any fieldwork and make archaeologists aware that the circumstances they happen to work in are only one set of conditions out of the many that their colleagues encounter in other parts of the world.

It is this interest in promoting ethical, responsible archaeology globally that made the *Global Cultural Heritage Manuals Series* suited to being a World Archaeological Congress (WAC) book series. WAC is a non-governmental, not-for-profit organization and is the only archaeological organisation with elected global representation. Membership is open to archaeologists, heritage managers, students and members of the public (see www.worldarchaeologicalcongress.org). WAC is committed to promoting the scientific investigation of the past and to redressing global inequities in archaeology through scholarly programs, conferences, and publications. Perhaps most importantly within the context of this series, WAC seeks to promote ethical archaeological practice, a frank acknowledgement of the political contexts within which research is conducted, and the protection of cultural heritage worldwide. It has a special interest in helping Indigenous peoples, minorities and those living in economically disadvantaged countries to develop the measures needed to protect their cultural patrimony.

While the volumes in this series will be of value to archaeologists seeking to undertake projects or fieldwork in a foreign country, we also expect that these books will be used in archaeology and anthropology departments to deepen student understanding of archaeological practices around the world. These books should also be of use to cultural heritage professionals within each country or region, and we expect that they will be taken into the field by archaeologists and others undertaking heritage fieldwork. In addition, the techniques outlined in these books will be of use to non-government organizations, historical societies and other local community groups interested in understanding the archaeological process and recording their heritage sites responsibly.

Claire Smith, Heather Burke, Parth Chauhan, Arkadiusz Marciniak
Series Editors

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Acronyms

AAA	Australian Archaeological Association
AACAI	Australian Association of Consulting Archaeologists Inc.
AAPA	Aboriginal Areas Protection Authority (Northern Territory)
AAV	Aboriginal Affairs Victoria
ACT	Australian Capital Territory
AHC	Australian Heritage Council
AIAS	Australian Institute of Aboriginal Studies
AIATSIS	Australian Institute of Aboriginal and Torres Strait Islander Studies
AIMA	Australasian Institute of Maritime Archaeology
AINSE	Australian Institute of Nuclear Science and Engineering
AMG	Australian Map Grid
ANSTO	Australian Nuclear Science and Technology Organisation
ARC	Australian Research Council
ASHA	Australasian Society for Historical Archaeology
ATSIC	Aboriginal and Torres Strait Islander Commission
AURA	Australian Rock Art Research Association
ANU	Australian National University
BP	Before Present
CDMA	Code-Division Multiple Access
CHM	Cultural Heritage Management
CLC	Central Land Council
CRM	Cultural Resource Management
CST	Central Standard Time
DEC	Department of Environment and Conservation (New South Wales)
DNA	Deoxyribonucleic Acid
EPA	Environmental Protection Agency
ESR	Electron Spin Resonance
EST	Eastern Standard Time
GDM	Geocentric Datum of Australia
GIS	Geographic Information System
GPS	Geographic Positioning System
ICOMOS	International Council on Monuments and Sites

IFRAO	International Federation of Rock Art Organisations
ILUA	Indigenous Land Use Agreement
IPPA	Indo-Pacific Prehistory Association
MGA	Map Grid of Australia
NAS	Nautical Archaeology Society
NAUI	National Association of Underwater Instructors
NHMRC	National Health and Medical Research Council
NLC	Northern Land Council
NSW	New South Wales
NT	Northern Territory
NZ	New Zealand
OSL	Optically Stimulated Luminescence
PADI	Professional Association of Diving Instructors
PFD	Personal Flotation Device
PhD	Doctoral Thesis/degree
PNG	Papua New Guinea
QLD	Queensland
RAIA	Royal Australian Institute of Architects and Engineers
SA	South Australia
TAS	Tasmania
TL	Thermoluminescence
UK	United Kingdom
UNESCO	United Nations Education, Scientific and Cultural Organization
USA	United States of America
U-Series	Uranium Series
UTM	Universal Transverse Mercator
VIC	Victoria
WA	Western Australia
WAC	World Archaeological Congress
WST	Western Standard Time

Preface

Archaeology Down Under

This book is the first in a series of cultural heritage manuals designed to function as “how-to” guides for anyone wishing to work as an archaeologist around the world. Many graduate students and early career archaeologists are eager to travel and experience archaeology as it is practiced in different countries. Underlying the practice of archaeology in any given place, however, is a great deal of background information with which a visiting practitioner needs to become familiar as quickly as possible. What is the local legislative situation? Who can you contact when looking for employment? What are the relevant codes of ethics, definitions of artifacts and sites and other forms of necessary local knowledge? Answering these questions requires at least a basic knowledge of the local frameworks for understanding archaeology, as well as the myriad idiosyncrasies of provincial practice. *Digging it Up Down Under* is the answer to these and many more questions as they apply to archaeology as it is currently practised in Australia. Its intent is to provide an overview of the characteristic features of archaeology “Down Under” and what professional and ethical expectations will be placed upon you if you’re seeking to work here. It is one thing to be familiar with the standard methods and techniques of archaeology as a universal discipline, but quite another to become acquainted with the background and context of how these methods are customarily used and adapted in a particular country. With this in mind, we have written this volume to help you in three ways:

- By identifying both the legal (what archaeologists are required to do) and non-legal essentials (the fundamentals for maintaining high quality professional standards) to working in Australia.
- By introducing you to the range and types of archaeological employment you can reasonably expect to find and how best to go about getting them.
- By collating the key sources of information relevant to undertaking archaeological projects, including research repositories, funding sources, and government and other specialist agencies.

As in other parts of the world, Australian archaeology has been shaped according to our individual history and the peculiar dynamics of our natural and cultural environments. This has produced a distinctive archaeology both similar to, and

different from, archaeology in other parts of the world. Unlike North America or the United Kingdom, Australia has a small population (not much more than 20 million people at the time of writing). Consequently, we do not have the large numbers of professional archaeologists that exist in other parts of the world. For example, in 2005 there were only 565 paid up members of the Australian Archaeological Association*, including students and retirees. In comparison, in 2005 the Society for American Archaeology had over 7,000 members. The existence of such a small community means that archaeologists in Australia must work in a range of professional capacities and it is usual for Australian archaeologists to have skills in more than one disciplinary area, even though they will also have areas of specialization. A level of professional breadth is particularly important for consultant archaeologists, who have to recognize, and adequately record, a wide range of site types. This contrasts with the situation in the United Kingdom or North America, where archaeologists tend to specialize much more narrowly, and where the crossing of sub-disciplinary fields can be considered dubious, or even unethical.

The main opportunities for full-time employment in archaeology come from universities, museums, and government departments, while consulting is most likely to provide opportunities for casual and temporary work. Archaeologists in universities work in either a teaching or research capacity, or both. While there are occasional appointments for research fellows, whose main task is to conduct research in their chosen field of interest, most university posts are for lecturers, who teach undergraduate courses, supervise postgraduate students and conduct independent research. Both lecturers and research fellows normally possess a PhD in archaeology.

When working in a museum, the task of an archaeologist is either that of a curator, who manages and cares for collections, or a researcher. A curator needs to have a minimum of a good Honours degree in archaeology, normally with a museum specialization, but research positions usually are filled by people with PhDs. Archaeologists working in museums deal with various aspects of maintaining the museum's collections, such as liaising with other archaeologists who have conducted excavations and may wish to deposit material, or with researchers who wish to study the museum's collections. They are also involved in liaising with members of the public, researching exhibitions and conducting independent research projects. The role of museums is important to archaeology, of course, since it is through museum displays that many people obtain their knowledge of Australia's past. Thus, these exhibits inform public perceptions of Australia's Indigenous population, as well as of our colonial origins (which were much more multi-cultural than has often been depicted) as well as perceptions of the value and uses of archaeology itself.

In recent years, there has been an increased call for archaeologists to mediate between the needs of development and the desire to preserve our cultural heritage as much as possible. This work is usually undertaken on a consultancy basis and is generically referred to as cultural heritage or cultural resource management. Cultural resource management is a major avenue for both full-time and

part-time/casual work in Australia, as archaeologists can be involved in a variety of consultancies, from recording and assessing the importance of sites and undertaking emergency excavations prior to development, to devising protection schemes for sites and artifacts and creating interpretive materials. The practical application of heritage legislation varies greatly from state to state (for more information, see Chapter 5), however, which in some places means that there is an overall lack of funding/commitment to proper site mitigation in the face of development. There are two main repercussions to this: firstly, there is a general lack of “dig bum” jobs on Australian sites, in contrast to the situation in other countries with substantial and recurrent funding for large-scale excavation projects. Secondly, it also means that you are much less likely to get a job in some states—those states with a less stringent commitment to cultural heritage issues, such as South Australia, for example, have relatively few consultancy opportunities, whereas those with stricter controls, such as New South Wales and Victoria, generate a large market for archaeological assessment and excavation work. Contacting consultancy firms in the capital cities is your best bet if you want to earn casual money as an archaeologist in Australia.

If you intend to work as a consultant archaeologist, bear in mind that, particularly in the CHM/CRM arena, all archaeologists have an ethical responsibility to be sufficiently well qualified to carry out a job to acceptable professional standards. Poor quality or ill-informed assessments damage the archaeological heritage and the professional standing of the archaeological community. The production of cultural heritage reports involves making assessments of significance (see Chapter 9), which itself requires a firm understanding of archaeology as a discipline, a knowledge of the range of sites which exist across Australia, the intent of cultural heritage legislation, the management policies of the relevant State authorities, and an understanding of site preservation and management measures. For this reason, the minimum qualifications considered adequate for undertaking a cultural heritage consultancy in Australia are an Honours degree in archaeology or a closely related field, or some other form of postgraduate qualification in archaeology, such as a diploma or Master of Letters. A three-year undergraduate Bachelor’s degree alone is not considered sufficient, even to be considered as a trainee archaeologist (see AACAI, 2005). The majority of Australian archaeologists abide by these rules, although they are professional recommendations, not legal requirements. In some circumstances, these requirements can be even more stringent. In New South Wales, for example, an historical archaeological excavation director has to have three years professional experience, as well as a tertiary degree or graduate diploma in archaeology or a related discipline (see Chapter 7).

Because industrial, commercial and residential development is governed by cultural heritage legislation in each state and territory, consultants work closely with archaeologists in the various government departments whose job is to administer this legislation. These departments are responsible for maintaining registers of sites, establishing guidelines for best practice, assessing consultants’ reports and liaising with developers and members of the public. Archaeologists employed

in these departments also conduct research projects related to the management needs of their particular department. Increasingly, Indigenous groups are employing archaeologists to research native title claims or to develop cultural heritage management programs and interpretive materials for cultural centres or tourism ventures.

It is more difficult to quantify the volunteer opportunities that are available in Australian archaeology. There is no central place that you can visit to find out about volunteer opportunities here, although many consultants recognize the special niche that volunteers on archaeological fieldwork can fulfil. According to the Australian Association of Consulting Archaeologists (AACAI)*—one of the main professional bodies for archaeological practice in Australia—volunteers can expect to be trained in a range of generic tasks, such as excavation, the washing or sorting of artifacts, and simple cataloguing procedures. Ethically, the site supervisor cannot ask a volunteer to take on work that is normally the responsibility of an assistant or specialist (AACAI 1995, www.aacai.com.au/policies/volunteers.html). In theory, while all archaeological projects could probably benefit from volunteer skills, in reality the opportunities to take on volunteers will probably be limited to urban areas and the large excavation and recovery projects that are undertaken in these places. Some Government departments, such as the NSW Heritage Office*, may advertise archaeological projects that are willing to take on volunteer labor, and the Australasian Society for Historical Archaeology* is currently investigating the feasibility of establishing a volunteer register. Museums are the institutions that most often run formal volunteer programs, although some conservation services, such as ArtLab* in Adelaide, are also often willing to take on and train volunteers. Another place to try is the Australasian Institute of Maritime Archaeology (AIMA)* website, which sometimes advertises volunteer opportunities in maritime archaeology.

Taken together, this implies three potential uses for the information contained in this book, depending on whether you are:

- A volunteer who would like to experience archaeology by working on a real site. It doesn't matter whether you're a specialist (i.e. archaeologist) or not: volunteers are making an increasingly popular contribution to archaeological fieldwork.
- An itinerant archaeologist interested in short-term work in Australia, as part of a broader cultural experience.
- A new graduate, either from Australia or overseas, interested in obtaining permanent work as a professional archaeologist.

Each of you will be able to draw different levels of knowledge from this book. For volunteers and visitors to Australia we have included the essential background to the development of archaeology in Australia, and the basics of what each kind of archaeology can offer. For specialists and new graduates there is considerable detail on the ethical issues confronting practitioners in Australia and the standards that must be adhered to when practicing as a professional archaeologist in this country.

Indigenous, Aboriginal or . . . ?

The words we use are powerful, and if you plan to work with Indigenous Australians you are going to have to watch your language. Language can be used to hurt people, not only through labelling and description, but also through silence and omission (Butler, 1997). Moreover, words that may be acceptable in one part of the world may be considered disrespectful in another, even though expressed in the same language. While Australian English has colloquial variants that are quite different to British or North American English (see, for example, Mark Moore's tips in Chapter 4), there are other differences that arise from our specific political circumstances. The most significant of these is the use of Indigenous archaeology as a synonym for prehistoric archaeology (rather than as a kind of ethical prehistoric archaeology, which is the way it is used in North America). The word "prehistory" is problematic, because it is based on a fundamental distinction between "history" (written by British invaders) and "prehistory" (the province of non-literate pre-invasion populations), which masks the co-existence of written and unwritten history in many parts of the country (see Burney, 1999; Craven, 1999; McNiven & Russell, 2005). Use of the word "prehistory" in an Australian context creates an artificial boundary across a period of continuous transition and fractures the temporal reckoning of the continent into a patchwork of colonial encounters.

Indigenous scholars regularly point out that much of what passes for "normal" discourse in an academic situation is actually the discourse of colonialism (see, for example, Craven, 1999; Rigney, 1999; Smith, 1999). The British colonizers of Australia, for instance, used the term "Aboriginal" to collapse the cultural and geographic boundaries of more than 600 diverse Indigenous groups, each of which had its own political system, laws and language, into a single category. The homogeneity implied by such terms facilitated implementation of the Australian government's policy of transforming a wide variety of Indigenous sovereign nations into ethnic minorities within the dominant state. This is reflected in the titles used by some state government departments, such as the Department of Aboriginal Affairs and Reconciliation (DAARE)*. Through such language, diversity and vitality was replaced with an imagined homogeneity and an implied stasis, a factor in the loss of identity that occurred as a result of invasion. Many Indigenous people, especially those from the Torres Strait who are ethnically and culturally very different to the Aboriginal populations of the mainland, resent this homogenization. They have redressed this to some extent, as is evident in the naming of government bodies, such as the Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS)*. Indigenous groups have also redressed this through adopting their own terms to describe themselves. In some parts of Australia Aboriginal people opt to call themselves by more specific regionalized names that recognize their autonomy and reflect original naming traditions prior to European contact. "Koori" and its variations ("Coorie", "Goorie" and "Koorie"), for example, is a word in many south-eastern Australian languages that means "man" or "people", and has been widely adopted throughout New South Wales and Victoria by Aboriginal groups. In Queensland, Aboriginal people call themselves "Murri" or "Murray",

while in Tasmania people refer to themselves as “Palawa”. In Western Australia they use the term “Nyungar”, or “Nyoongar”, and people in South Australia use “Nunga”, a term linguistically affiliated to the Western Australian words. Often, people prefer to be referred to by linguistic affiliation (i.e. their language group), as this reinforces their ties to country. In a broader political context the term “Indigenous” is sometimes used, although “Aboriginal” is still preferred by many people on the grounds that “Indigenous” reinforces the colonial division that equated Europeans with culture and Indigenous peoples with nature (Vincent Branson personal communication, February 12th, 2006). In addition, in parts of northern Australia Aboriginal people may call themselves “blackfellas”, and Europeans “whitefellas”, but you need to have been working with people closely for a long time before you could be sure you were using the term correctly, as these are terms that can only be used by people who exist inside the social structures, not by observers.

Each group has a number of terms they can draw upon, according to the particular situation. People from the Torres Strait, for example, refer to themselves as “Torres Strait Islanders” or “Islanders”, but also identify according to the island they are from, their clan grouping, and, in at least one case, in relation to an ancestral village (Mabuiag) (Bruno David, email communication, February 11th, 2006). It makes sense that the choice of term will vary according to the relationship between the person speaking and their audience: there is little point referring to yourself in relationship to an ancestral village or island if the person you are talking to has no knowledge of these places. Thus, nomenclature is a political choice not only in general terms, but also in regards to the particular situation.

The convention we have adopted throughout this book is to use “Indigenous” when we write of issues, such as cultural and intellectual property rights, that have an impact on all Aboriginal and Torres Strait Islander people. Following the increasing practice of Indigenous authors (e.g. Craven, 1999; Smith, 1999; various papers in Smith & Wobst, 2005), we use the term “Indigenous peoples”. The capital “I” emphasizes the nationhood of individual groups, while use of the plural “peoples” internationalizes Indigenous experiences, issues and struggles (Smith, 1999:114–115). We use the term “Aboriginal” to refer to Aboriginal people from mainland Australia, and “Torres Strait Islander” to refer to people from the Torres Strait Islands. When referring to specific groups, we refer to language group (e.g. Ngadjuri, Ngarrindjeri, Jawoyn). When several language groups are involved we use the regional term used by local Aboriginal people themselves (e.g. Murri, Ngunga, Palawa) and when that kind of term does not exist, we refer to people in terms of their geographic location (e.g. Barunga people). The basic principle is to show respect by using the terms that people use to describe themselves.

The Structure of This Book

Writing a book about all facets of archaeology in Australia is not an easy task; keeping it within a reasonable word limit is even less so. As a result each chapter

is, of necessity, relatively brief and tackles only the key issues that we think you need to be aware of. To deal with this inevitable brevity we have included two sections at the end of each chapter to help direct your knowledge and broaden it in specific areas. The first, “References and Further Reading”, points you in the direction of detailed scholarly and theoretical works which complement the background information provided in each chapter. Seminal archaeological studies and papers have been included here. The second, “Key Guides and Resources”, is intended to be more of a “library” of practical advice. This section contains a range of the most useful on-line and print resources relating to various aspects of archaeology, fieldwork and assessment. A third resource is Appendix 1, the “Archaeology Yellow Pages”. This collates contact details for the key organizations relevant to archaeological practice in Australia, including all of the recommended contacts mentioned by name in the text. Throughout this book an asterisk (*) is used the first time we mention these important points of contact. Finally, in order to teach some of the lessons of “real” archaeology, we have included a range of handy hints and helpful advice from professional archaeologists around Australia. Some may be a bit tongue-in-cheek, but all of it demonstrates what archaeology is really like “Down Under”.

Acknowledgments. The genteel life of the scholar seems to be slipping away. Throughout the world, academics are working in increasingly pressed scholarly environments, and this makes it difficult for people to find the time to engage in the discussion and debate that is the core of any scholarly enterprise. Therefore, we are very grateful to those people who took the time and trouble to assist us with various aspects of this book. Firstly, we thank the people who gave us their tips and advice: Mitch Allen, Victoria Alvarado, Jane Balme, Kirstin Brett, Mark Darby, Ines Domingo, Joe Flatman, Bradley Garrett, Denis Gojak, Alice Gorman, Daryl Guse, Ken Isaacson, Gail Higginbottom, Jeannette Hope, Wayne Johnston, Paulyn Kerr, Julie Kohlhagen, Lyn Leader-Elliott, Ian Lilley, Jane Lydon, George Merriam, Mark Moore, Kate Morse, Bobby McAskill, Jo McDonald, Angie McGowan, Sam McKay, Paul Marks, Laurie Obbink, Colin Pardoe, Adam Reed, Mal Ridges, Di Smith, Pam Smith, Emily Smyth, Katrina Stankowski, Iain Stuart, Sean Ulm, Natalie Vinton, Lynley Wallis, Esmée Webb, Roy and Mitch Willis, Ken Wilson, and Richard Woolfe. While we solicited many of these tips, others came in response to a call on the AUSARCH list-server. Secondly, we would like to thank people who helped with other facets of this book. Elizabeth Bradshaw, Iain Davidson, Joe Flatman, Peter Gesner, Yvonne Kaiser-Glass, Jack Golson, Jeremy Green, Gary Jackson, Laila Haglund, Glen Ingram, Sam McKay, Sally May, Vincent Megaw, David Parham, Donald Pate, Nathan Richards, Katrina Stankowski, Iain Stuart, Lynley Wallis, Duncan Wright and Richard Wright commented on draft chapters or gave us advice or assistance on various aspects of the book. Parth Chauhan and Bruno David kindly reviewed the entire text. Two of our students have helped with key facets of this book: Zandria Farrell thought up the title, and Daniel Gale drew figures 2.3, 2.5 and 2.9. The photo of the grieving mother in Figure 6.1 is published

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References and Further Reading

- Butler, J. (1997). *Excitable speech. A politics of the performance*. London: Routledge.
- Craven, R. (1999). *Teaching Aboriginal studies*. Sydney: Allen and Unwin.
- McNiven, I. & Russell, L. (2005). *Appropriated pasts: Indigenous peoples and the colonial culture of archaeology*. Walnut Grove, California: AltaMira Press.
- Rigney, L.-I. (1999). Internationalisation of an Indigenous anti-colonial cultural critique of research methodologies. A guide to Indigenist research methodology and its principles. Reprinted in *WICAZO SA Review: Journal of Native American Studies, Fall, 14(2)*, 109–122.
- Smith, C. & Wobst, H.M. (Eds.) (2005). *Indigenous archaeologies: Decolonizing theory and practice*. London: Routledge.
- Smith, L.T. (1999). *Decolonizing methodologies. Research and Indigenous peoples*. Second edition. London: Zed Books.

1

A Brief History of Australian Archaeology

The professional practice of archaeology in Australia is a relatively recent endeavor, only crystallising into a distinct discipline in the 1960s and 1970s. It was during this period that Australian archaeology was first taught at Australian universities, that professional organizations dedicated to Australian archaeology were formed, that Federal and State legislation was enacted to protect archaeological sites and artifacts, and that employment opportunities opened up, either in government departments and other institutions or in cultural heritage management. Since then, there has been an enormous increase in the number of recorded sites, as well as increasing evidence for their environmental and cultural diversity, a growing understanding of the antiquity of Aboriginal occupation within Australia and an increasing interest in colonial (historical) and maritime archaeology. However, there is still much work to be done in all areas of the country. Australian archaeology today covers a variety of interests: from Indigenous archaeology focusing on the Aboriginal and Torres Strait Islander occupation of Australia over the last 50,000 years, to historical archaeology which deals with the last few hundred years since colonial contact.

Prior to the professionalization of the discipline, most archaeological observations were made by amateurs, explorers and professionals from other disciplines, such as geology and anthropology. It could even be argued that the first disciplinary observations of Australia's past were made, not by scientists or professionals of any kind, but by its Indigenous occupants, who have lived here for around 50,000 years and who routinely interpret the world around them in terms of its material remains (see Chapter 2). In the 17th and 18th centuries, however, this long Indigenous tradition was paralleled by the observations and activities of explorers and early colonists. The first of these was English officer, William Dampier, who made astute observations about how to read the lifestyle of Indigenous Australians from food remains when he visited the shores of Western Australia in 1688 and 1699 (Dampier, 1699 [1906], cited in Horton, 1991:7). English explorers, such as James Cook and George Bass, were also interested in understanding the lifestyles of the exotic inhabitants of this new land, and made similar observations on their voyages some seventy to one hundred years later. The strangeness of these new encounters and a desire to understand "man" in the "pure state" of nature fired the colonial

TABLE 1.1. Changing dates for the occupation of Australia

Date	Site	Dating method	Reference
>400	Meredith, Victoria	Visual analysis of excavated materials	MacPherson, 1884
1,770	Ballina, New South Wales	Visual analysis of geomorphology and stratigraphy	Statham, 1892
>5,000	Devon Downs, South Australia	Visual analysis of stratigraphy, C ¹⁴ on charcoal	Hale & Tindale, 1930; Smith, 1982
9,000	Cape Martin, South Australia	C ¹⁴ on charcoal	Mulvaney, 1961
16,000	Kenniff Cave, Queensland	C ¹⁴ on charcoal	Mulvaney & Joyce, 1965
31,100	Lake Mungo, New South Wales	C ¹⁴ on shell	Barbetti & Allen, 1972
35,000	Devil's Lair, Western Australia	C ¹⁴ on charcoal	Balme et al., 1978
39,500	Upper Swan, Western Australia	C ¹⁴ on charcoal	Pearce & Barbetti, 1981
50,000	Malakuninja II, Northern Territory	Thermoluminescence	Roberts et al., 1990
46–50,000	Lake Mungo, New South Wales	C ¹⁴ on bone, thermoluminescence	Bowler et al., 2003
60,000	Lake Mungo, New South Wales	Electron spin resonance (ESR), optically stimulated luminescence (OSL) and uranium series	Adcock et al., 2001 (still under debate)

imagination, and the recording of observations of an archaeological or anthropological nature, and the collection of artifacts became integral to the acquisition of these new lands. Building on this, the early governors of the Colony of New South Wales carried out the first archaeological excavations (Horton, 1991:3–5). Human burials were a focus of these early excavations, as researchers sought to determine whether the treatment of the dead by Indigenous Australians showed evidence of conviction in an afterlife, and thus of religious belief (Horton, 1991:5).

The first serious attempt to estimate the antiquity of Indigenous occupation was made in 1884 by Reverend Peter MacPherson, who tentatively suggested 400 years on the basis of his excavations of oven-mounds and associated stone circles in Meredith, Victoria (see Horton, 1991:34–43). A few years later, Statham's examination of the geomorphology and stratigraphy of shell mounds excavated for road works in New South Wales suggested an occupation date of 1,770 years (Horton, 1991:50). Since this time, estimates of the age of occupation of Australia have doubled on a regular basis (see Table 1.1).

Today, it is generally accepted that Indigenous people occupied the Australian continent by 50,000 years before present (BP), although dates much older than this are sometimes advocated (e.g. Adcock et al., 2001; Fullagar et al., 1996). There are many sites dated to between 30,000 BP and 40,000 BP (e.g. Balme, 1995; Balme

et al., 1978; O'Connor, 1995; Pearce & Barbetti, 1981), at which point radiocarbon dating becomes very difficult. Earliest dates can be pushed back to around 53,000 BP on the assumption that the first colonizers are likely to have come to Australia at the time of lowest sea level, and this is supported by thermoluminescence (TL) dates at Malakuninja II, in Arnhem Land, Northern Territory (Roberts et al., 1990) and optically stimulated luminescence (OSL) dates from Deaf Adder Gorge, Northern Territory (Roberts et al., 1993). Even earlier dates have been proposed using other dating techniques (e.g. Adcock et al., 2001), but it is too soon to tell if these claims will survive scrutiny (for more detail on the Indigenous colonization of Australia, including dates and major sites, see Chapters 2 and 6) (see Figure 1.1).

1.1. The Rise of Professional Archaeology in Australia

While archaeological activities had been undertaken since the first colonisation by the British (and before that in Aboriginal techniques for interpreting human behaviour from material remains), it took some time for archaeology to develop in Australia as a distinct discipline. This process involved a number of key individuals and events, depicted in Table 1.2. This timeline has been developed to identify “firsts” in the historical development of Australian archaeology, not only in terms of disciplinary “firsts” but also in terms of key players, and how they contributed to the professionalization of the discipline in Australia.

Australia’s first eminent archaeologist was Vere Gordon Childe, the Foundation Professor of Prehistoric Archaeology at Edinburgh University, from 1927 to 1946 and Professor of Prehistoric European Archaeology at the University of London from 1946 until his retirement in 1956. His book *The Dawn of European Civilization* had a profound influence on British and European archaeology for several decades. In 1957, after an absence of about 35 years, Childe returned to Australia and died soon afterwards (Mulvaney, 1990 [1957]:161). In this same year Derek John Mulvaney taught the first course in Australian and Pacific archaeology at the University of Melbourne*. Mulvaney was appointed to a lecturing post in 1954 and had been a tutor in Greek and Roman history from 1949 to 1951. In 1960 Isabel McBryde was appointed to a lectureship in Prehistory and Ancient History at the University of New England* in New South Wales. Other appointments followed, primarily in Indigenous archaeology, but also in historical archaeology, most notably with the appointment of Graham Connah as Head of the Department of Prehistory and Archaeology at the University of New England. The first courses in historical archaeology were taught during the 1970s, keying into a nascent interest of the Australian public to understand their colonial heritage. Maritime archaeology was introduced into Australian universities in the mid 1990s.

The appointment of academics with a commitment to teaching and researching Australian archaeology framed the development of archaeology in two ways. Firstly, these appointments were necessary to the establishment of various sub-disciplines within archaeology, since they were the means by which these fields of study could be made available to students. Secondly, the increased emphasis on

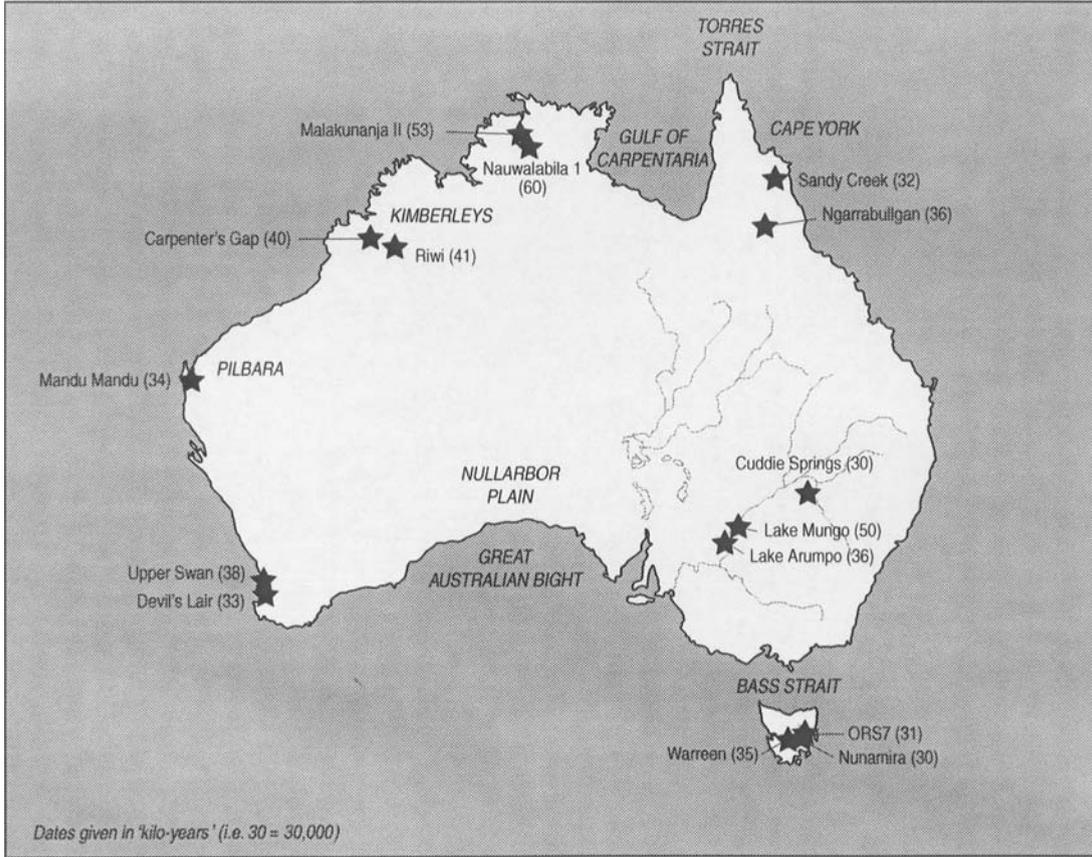


FIGURE 1.1. The oldest archaeological sites in Australia.

TABLE 1.2. Timeline of the historical development of Australian archaeology

50,000	Aboriginal people interpret the material remains of human behaviors.
1699	William Dampier makes the first written records of archaeological observations in his analyses of Aboriginal campsites in WA.
1788	Captain Arthur Phillip and John Hunter open Aboriginal graves to determine burial practices.
1830	Major Thomas Mitchell discovers <i>Diprotodon</i> bones in Wellington Caves, NSW.
1892	Vere Gordon Childe born.
1897	Walter Roth publishes the three volume set <i>The Queensland Aborigines</i> , the first detailed description of Aboriginal material culture and technology.
1901–1902	Baldwin Spencer's and Frank Gillen's expedition to Central Australia.
1918	Norman Tindale begins work at the South Australian Museum in Adelaide.
1920	Frederick McCarthy begins work at the Australian Museum in Sydney.
1929	First archaeological excavation in Australia undertaken at Devon Downs by Herbert Hale and Norman Tindale, of the SA Museum.
1930s	Norman Tindale leads Board of Anthropological Research expeditions to Central Australia.
1939	Donald Thomson publishes <i>The Seasonal Factor in Human Culture</i> , the first explicit ethnoarchaeological study in Australia.
1948	American–Australian Expedition to Arnhem Land, led by Charles Mountford.
1949	John Mulvaney appointed as a tutor in Greek and Roman history, in the Department of Ancient History at the University of Melbourne, Victoria. Appointed to a lectureship in 1954.
Mid to late 1950s	First state and government legislation to protect cultural heritage.
1953	Edmund Gill publishes the first archaeological radiocarbon dating in Australia, of a midden near Warrnambool, Victoria, dated at 500 BP.
1957	Vere Gordon Childe returns to Australia for the first time in about 35 years abroad, and commits suicide soon after in the Blue Mountains, NSW. First course in Australian and Pacific Prehistory taught by John Mulvaney at Melbourne University.
1960	Isabel McBryde appointed to the Department of Classics and Ancient History at the University of New England, New South Wales.
1960–1961	Judy Birmingham, Vincent Megaw, and Richard Wright leave Britain to take up appointments in archaeology at Sydney University; all begin field work in Australia.
1960–1963	John Mulvaney excavates at Kenniff Cave, Qld. Establishes the Pleistocene occupation of Australia.
1961	Interim Council formed for Australian Institute of Aboriginal Studies. First Principal was Frederick McCarthy. Confirmed by <i>AIAS Act 1964</i> , which was replaced by the <i>AIATSIS Act 1989</i> .
1962	Richard Wright establishes the first course in Australian archaeology at Sydney University.
1963	Rhys Jones arrives in Australia, to join the Department of Anthropology, Sydney University. Western Australian Government introduces first underwater cultural heritage legislation (later amended to <i>Maritime Archaeology Act 1973</i>) to protect sites.
1966	Rhys Jones publishes on the archaeological sequence at Rocky Cape, Tasmania.
1968	Jim Bowler discovers Lake Mungo 1, dated to 26,000 BP, the world's oldest cremation. Later re-dated to 46–50,000 BP. Rhys Jones publishes on the colonization of Australia and Tasmania, establishing that it was a fairly rapid process.

(cont.)

TABLE 1.2. (continued)

1969	Jack Golson appointed Foundation Professor of Prehistory in the Research School of Pacific Studies, Australian National University. John Mulvaney publishes <i>A Prehistory of Australia</i> , the first synthesis of Australian prehistory.
1970s	Increase in legislation to protect cultural heritage. First rescue excavations as part of legislative requirements, and first uses of mechanical equipment on an excavation.
1970	Australian Society for Historical Archaeology established. Name changed to Australasian Society for Historical Archaeology in 1991. Charles Dortch of the WA Museum discovers evidence of human occupation at Devils Lair, Margaret River, WA, estimated at 30,000 BP.
1971	Graham Connah appointed to the Department of Classics and Ancient History at the University of New England, NSW. John Mulvaney and Jack Golson publish <i>Aboriginal Man and Environment in Australia</i> . Richard Wright publishes <i>Archaeology of the Gallus Site, Koonalda Cave</i> , establishing Pleistocene occupation of the area, and of Aboriginal art in the form of engravings and finger flutings. Western Australia Museum establishes Department of Maritime Archaeology. Jeremy Green appointed head of department.
1972	Peter Ucko and Andree Rosenfeld come to Australia. Ucko becomes the second Principal of AIAS. A little later, Rosenfeld takes a post at the ANU. John Mulvaney publishes <i>Australian Archaeology. A guide to field and laboratory techniques</i> , the first practical guide to archaeology in Australia. R.A. Binns and Isabel McBryde publish <i>A Petrological Analysis of Ground-edge Artefacts from Northern New South Wales</i> , demonstrating the antiquity and breadth of trading networks in Aboriginal Australia.
1972–1975	Jeremy Green leads excavations of the <i>Batavia</i> , in WA.
1973	Australian Archaeological Association established.
1974	First issue of <i>Australian Archaeology</i> . Jim Bowler discovers Lake Mungo III, dated to at least 30,000 BP, the world's oldest deliberate burial. Later re-dated to at least 46–50,000. Norman Tindale publishes <i>Aboriginal Tribes of Australia</i> , with accompanying map of tribal boundaries. Peter Ucko convened the AIAS conference on Aboriginal anthropology, the first (and last) attempt to review all aspects of Aboriginal anthropology at a single conference. This produced major publications— <i>Stone tools as cultural markers</i> (Wright, 1977), <i>Form in Indigenous Art</i> (Ucko, 1977) and <i>Origin of the Australians</i> (Kirk and Thorne, 1976).
1975	<i>Australian Heritage Commission Act 1975</i> .
1976	Commonwealth enacts the <i>Historic Shipwrecks Act 1976</i> protecting all Commonwealth shipwrecks. First issue of the <i>Bulletin of the Australian Institute of Maritime Archaeology</i> .
1977	Jim Allen, Jack Golson and Rhys Jones publish <i>Sunda and Sahul</i> (which includes Sandra Bowdler's paper on the coastal colonisation of Australia.)
1979	First AAA conference, following on from Kiloa conference organised by Ian Johnson in 1978. First development of the <i>Burra Charter</i> . Australian Association of Consulting Archaeologists Inc. established. JVS Megaw began major collections of Aboriginal art for Flinders University Art Museum. In 1995 he is awarded a personal Chair in Visual Arts and Archaeology.

TABLE 1.2. (continued)

Late 1970s–early 1980s	<p>First courses in historical archaeology taught at Australian universities by Judy Birmingham, Sydney University and Graham Connah, University of New England.</p> <p>Archaeologists form their own consulting companies. The first archaeologist to make a living purely from consultancy was probably Laila Haglund. Other major players include Val Attenbrow, Helen Brayshaw, Mary Dallas and Jo McDonald (note gender pattern).</p>
Early 1980s	<p>Led by John Mulvaney, Rhys Jones, Kevin Kiernan, Don Ranson and others, Australian archaeologists successfully band together to save the Pleistocene site, Fraser Cave (later called Kutikina), from being flooded by a proposed dam on the Franklin River, Tasmania.</p>
1980	<p>The Maritime Museum of Western Australia is established in response to the need to house the massive ship structure of the <i>Batavia</i>.</p> <p>Curtin University of Technology and the WA Museum establishes first graduate diploma course in maritime archaeology</p>
1982	<p>Betty Meehan publishes <i>Shell Bed to Shell Midden</i>.</p> <p>J. Peter White and James O'Connell publish <i>A Prehistory of Australia, New Guinea and Sahul</i>.</p>
1983	<p>Josephine Flood publishes <i>Archaeology of the Dreamtime</i>.</p> <p>Sandra Bowdler appointed to a Chair in Prehistory at the University of Western Australia.</p> <p>Graham Connah publishes <i>Australian Field Archaeology: A guide to techniques</i>.</p> <p>First excavations at First Government House, NSW.</p> <p>First issue of <i>Australian Journal of Historical Archaeology</i> (later <i>Australasian Journal of Historical Archaeology</i>).</p> <p>Harry Lourandos publishes <i>Archaeology in Oceania</i> article on intensification.</p> <p>Australasian Institute for Maritime Archaeology established.</p> <p>Australian Rock Art Research Association (AURA) established by Robert Bednarik and others. First President was Mike Morwood.</p>
1984	<p>First issue of <i>Rock Art Research</i>.</p>
1988	<p>Graham Connah publishes <i>Of the Hut I Builded</i>, the first overview of historical archaeology in Australia.</p> <p>Andree Rosenfeld publishes <i>Rock Art Conservation in Australia</i>.</p> <p>First Congress of the Australian Rock Art Research Association.</p>
Late 1980s–present	<p>Global developments in new dating techniques, led by John Prescott, Nigel Spooner, David Price, Reiner Grun and Alan Watchman.</p>
Late 1980s–early 1990s	<p>First Aboriginal graduates in Australian archaeology, mostly students of John Mulvaney and Isabel McBryde.</p>
Early 1990s	<p>Dispute between some archaeologists at La Trobe University and the Tasmanian Aboriginal Legal Centre.</p>
1990	<p>Sharon Sullivan appointed as Executive Director of Australian Heritage Commission.</p>
1990	<p>Rhys Jones and colleagues use the thermoluminescence technique to date Malakunanja II at 50,000–60,000 BP.</p>
1991	<p>First Australian “Women in archaeology” conference, convened by Hilary du Cros and Laurajane Smith.</p>
1991	<p>List of demands presented to AAA Plenary session by Aboriginal delegates.</p>

(cont.)

TABLE 1.2. (continued)

1992	AAA Code of Ethics adopted, when Iain Davidson was President of AAA. The Code was revised in 2004. Iain Davidson and Bill Noble publish their <i>Archaeology in Oceania</i> article on the significance of the first colonisation of the Australian region for understanding language origins and modern human behavior. High Court decision in favor of Torres Strait Islander Eddie Mabo and others, which rejected the doctrine of <i>terra nullius</i> .
1993	<i>Federal Native Title Act 1993</i> , formally recognizing native title rights and interests in Australian land and waters.
Mid 1990s	Establishment of ANSTO, the first high precision AMS facility in Australia. Hindmarsh Island controversy, which seriously challenged the utility of State and Commonwealth heritage protection legislation.
Mid to late 1990s	Mark Staniforth, Martin Gibbs and Peter Veth teach the first undergraduate courses in maritime archaeology in Australian universities.
1996	Jinmium. When some of our best scholars got it wrong. Elizabeth Bradshaw appointed to the first permanent archaeological post with a mining company, Hammersley Iron (Rio Tinto).
2001	First joint conference between AAA, ASHA and AIMA.
2003	First National Archaeology Week.
2003	Australian-Indonesian team led by Mike Morwood discovers <i>Homo floresiensis</i> in Flores. Human footprints, dated to between 19,000 and 23,000, found at Lake Mungo by Mary Pappin jnr, of the Mutthi Mutthi people, while on a field school for young Aboriginal people run by Steve Webb of Bond University.

researching the archaeology of Aboriginal and colonial Australia, both terrestrial and maritime, meant that archaeologists gained a much more thorough knowledge of Indigenous and colonial history in Australia. This changed our understandings of both the long- and short-term histories of the continent.

Equally as important as academic posts, the rise in the 1960s and 1970s of Federal and State legislation aimed at protecting cultural heritage sites led to the establishment of government departments—and the employment of archaeologists—responsible for overseeing and policing heritage legislation (for more information see Chapter 5). One important outcome of this was the establishment of site recording programs to register archaeological sites and an increased recognition of the importance of cultural heritage to the identity of contemporary communities, both Aboriginal and European. This articulated with the expansion of archaeological research and teaching, creating a period of unprecedented growth in the number of research projects and sites. This period produced initial chronologies for many parts of Indigenous Australia, as well as the first archaeological understandings of Australia's colonial heritage.

In 1964 an Act of Parliament established The Australian Institute of Aboriginal Studies (AIAS), which had been operating on an interim basis since 1961, and signified the rise of Aboriginal affairs in the national consciousness. Over the next two and a half decades AIAS supported a large number of scholars and promoted increased interaction between scholars in different fields, in the process helping to

create a new disciplinary field—"Aboriginal studies". In 1989, the *AIAS Act* was replaced by the *AIATSIS Act*, which established the Australian Institute of Aboriginal and Torres Strait Islander Studies. AIATSIS not only conducts and funds research, but has established a comprehensive library that holds what is probably the world's most extensive collection of printed, audio, and visual materials on Aboriginal and Torres Strait Islander culture and issues. On-going Aboriginal concern with the legislative processes that affect their cultural heritage and the high level of Indigenous politicization in Australia (Allen, 1983; Davidson, 1992; Ucko, 1983) mean that archaeological sites are commonly understood to be integral to Indigenous political processes in the present, particularly as components of Indigenous land claims and Native Title claims. Archaeologists, anthropologists and Indigenous people customarily work together to establish the legal validity of these Indigenous relationships to land.

The other recent movement of some note is the growth of job opportunities with mining companies. In 1996, Elizabeth Bradshaw became the first Australian archaeologist to take up a full-time position with a mining company, Hamersley Iron (a member of the Rio Tinto group). Today, Rio Tinto has 12 staff roles for heritage professionals across its Australian companies (Elizabeth Bradshaw, email communication, March 22nd, 2006), and employs many more consultant archaeologists to undertake pre-development assessments, making it a major player in the sphere of archaeological employment. This is done as part of its commitment to achieving enduring, mutually beneficial relationships with Aboriginal communities.

After the Australian High Court recognised that Aboriginal peoples had a "pre-existing and continuing connection with the land" and the Australian Government passed the *Native Title Act*, Leon Davis, CEO of then CRA (now Rio Tinto) stated in a speech to the Australian Securities Commission that the company was comfortable with the Act and looked forward to "a series of CRA operations being developed in partnership with Aboriginal people" (Davis, 1995). Rio Tinto was the first mining company to publicly support Native Title, stepping away from decades of conflict and distrust between the resource industry and Aboriginal communities. Rio Tinto has now directly negotiated over 70 mine development and land access agreements with Aboriginal Traditional Owner groups (Harvey and Nish, 2005). Cultural heritage protection is a critical component of these agreements.

Rio Tinto's heritage approach has developed both from these processes and earlier experiences where mine developments such as Marandoo led to serious conflict with Aboriginal groups and significant losses to the company (Bradshaw, 2000). Company cultural heritage management standards and professional staffing helps Rio Tinto to meet its commitments in these agreements and to work in partnership with Aboriginal communities for the protection of their heritage. As Bradshaw states (email communication, March 30, 2006), "being part of a mining company that has this approach is no longer 'working for the enemy'".

That archaeologists had a critical role in this development in the attitudes of mining industry, from an adversarial stance to seeking cooperative relationships, is demonstrated by the growth of positions in mining companies for heritage professionals.

AUSARCH-L: A List-Server Dedicated to Australian Archaeology

There are several ways in which you can familiarize yourself with current issues and questions in Australian archaeology. One of the most effective of these is to join AUSARCH-L, a list-server dedicated to Australian archaeology. This list-server contains debates and analysis of new finds, employment opportunities, information about conferences and other material fundamental to the operation of the Australian archaeological community. Its purpose is to facilitate discussion about all aspects of Australian archaeology (Indigenous, historical, maritime etc.). It is essentially a digital "mail room" where you can exchange information with others. Messages regularly include questions to other subscribers, presentations of information, or discussions of results. To subscribe to the list, fill out the on-line form available at: <http://mailman.anu.edu.au/mailman/listinfo/ausarch-l>. Once you submit the form you will receive an email requesting confirmation, and, when this is received, your request will be held for approval by the list moderator. You will be notified of the moderator's decision by email. The list is unmoderated and anyone can subscribe and send messages to it. It is a great way to get feedback on your ideas or to find out what other archaeologists are doing. The moderators of AUSARCH-L are Peter Hiscock, Peter Veth and David Roe.

Other ways of becoming familiar with Australian archaeology are through reading the local journals and publications, and also by emailing people in your area of interest (but not the authors of this book), or through meeting Australian archaeologists at conferences.

1.2. Anthropology and Archaeology in Australia

The contemporary shape of academic archaeology in Australia reflects our colonial origins. Our major research and teaching departments were established by British or British-trained academics who followed the British model of treating archaeology as a separate discipline to anthropology. This is in contrast to the situation in North America, where archaeology is one of the four fields taught in anthropology departments (the others being cultural anthropology, linguistics and physical anthropology). In Australia, archaeology is taught and practiced as a completely separate discipline, although all archaeologists are aware of the close practical and theoretical links between archaeology and anthropology.

One practical outcome of this is that anthropologists are usually employed separately to archaeologists to deal with the "living history" aspects of the Indigenous past, such as issues relating to kinship, descent or genealogies. Another is that knowledge within the disciplines of archaeology and anthropology is disseminated within separate spheres: archaeologists and anthropologists are trained in different departments (and often different universities) and have different professional networks. However, there are many areas of interest that overlap. Archaeologists,

for example, clearly need to know how to determine who are the appropriate people to talk to for an area, and must also understand the ways in which kinship networks in Aboriginal Australia regulate people's access to land and sites. Anthropologists, on the other hand, are interested in the time depth that archaeology can establish for human occupation in an area, and in charting group movements and the use of sites. The important point to note is that the disciplinary tradition in Australia is based on the British model, not the American, and that interactions between archaeologists and anthropologists are peripheral, rather than integral, to the day-to-day conduct of Australian archaeology.

1.3. The Ethics of Working in Australia

We all know that doing archaeology often involves working with cultural material in which other people have rights and responsibilities, and that these interest groups have their own values and notions of priority. This means that archaeological activities and research are likely to intersect with a mix of potentially competing agendas. The question of who controls the past is a practical reality that has to be addressed in the many day-to-day interactions between archaeologists and the people with whom they work, especially when working with Indigenous populations (see McBryde, 1986). At some point in their careers, virtually every archaeologist experiences the ethical dilemma of having to make decisions amongst a range of choices, each guided by potentially conflicting values (see Vitelli, 1996; Zimmerman, Vitelli, & Hollowell-Zimmer, 2003).

Ethics can be an especially difficult issue for people who wish to conduct archaeology in a country other than that in which they were trained. While professional archaeological associations in most countries have established codes of ethics that can be used to steer archaeologists through ethical dilemmas, these codes can vary greatly, not only between, but also within, countries. There is enormous variation in the codes of ethics that have been adopted by archaeological associations globally. These range from promoting the greater understanding of archaeology (Archaeological Institute of America) and the stewardship of cultural heritage (Society for American Archaeology and New Zealand Archaeological Association) to recognizing a paramount professional responsibility to those who are being studied (American Anthropological Association), or acknowledging the importance of indigenous cultural heritage to the survival of indigenous cultures (Canadian Archaeological Association and World Archaeological Congress*). While these factors are integral to professional archaeological responsibility across the discipline, there is one very clear difference: an ethical code which promotes stewardship of the archaeological resource as a first principle provides a completely different starting point to one which is premised on the survival of Indigenous cultures. The existence of different ethical starting points means that archaeological responses to ethical dilemmas can have vastly different outcomes (see Smith & Burke, 2003). This problem is compounded if the researcher is being guided by the ethical codes of one country to resolve an ethical dilemma in another. Therefore, it is essential

that archaeologists who wish to work in Australian archaeology become familiar with the Code of Ethics of the Australian Archaeological Association (AAA). You should note that this Code of Ethics, as is the case elsewhere, changes through time.

The need for a formal code of ethics was first mooted at the annual Australian Archaeological Association conference in Townsville in December 1990. A large contingent of Aboriginal people attended this meeting—and, in fact, attended a mini alternative meeting down the hill from the main meeting. It was at this conference that Australian archaeologists had to squarely face the implications of their work for the people whose heritage they were studying. At the conclusion of this meeting, an Aboriginal delegation presented a list of demands to the AAA Annual General Meeting. In the ensuing discussions, the Association undertook to develop a formal Code of Ethics, with specific guidelines for working with Aboriginal heritage. The resulting code was based on the First Code of Ethics of the World Archaeological Congress, with only very minor differences. Shaped by an agreed view that Indigenous people should have the primary right to control their own cultural heritage, this code was adopted by the Association in 1992.

At the AAA annual meeting at Jindabyne in 2003, the Code of Ethics was broadened to include principles relating to the archaeological record, and to professional conduct among members. These principles were amended slightly at the 2004 meeting at the University of New England in Armidale. The principles relating to Indigenous archaeology are outlined below.

Principles Relating to Indigenous Archaeology

1. Members acknowledge the importance of cultural heritage to Indigenous communities.
2. Members acknowledge the special importance to Indigenous peoples of ancestral remains and objects and sites associated with such remains. Members will treat such remains with respect.
3. Members acknowledge Indigenous approaches to the interpretation of cultural heritage and to its conservation.
4. Members will negotiate equitable agreements between archaeologists and the Indigenous communities whose cultural heritage is being investigated. AAA endorses and directs members to the current guidelines regarding such agreements published by the Australian Institute of Aboriginal and Torres Strait Islander Studies (www.aiatsis.gov.au/corp/docs/EthicsGuideA4.pdf).
5. Members recognise the Indigenous property rights of Indigenous peoples.

Other professional groups, such as the Australian Anthropological Society*, the Australian Association of Consulting Archaeologists, the Australasian Institute of Maritime Archaeology, the International Federation of Rock Art Research and the World Archaeological Congress, also have codes of ethics that are important to Australian archaeology (see Appendix 2). Each of these documents distils

the beliefs of its members, articulates the underlying assumptions and guiding principles of the association and provides a fundamental framework for conducting research in an ethical and responsible way. Finally, it is important to remember that codes of ethics are guidelines used in the resolution of ethical dilemmas, not legally binding documents. They provide a framework for understanding the current standards of best practice and, through this, create an appropriate spirit within which to work through ethical dilemmas (for more information on particular ethical issues surrounding the practice of Indigenous, historical and maritime archaeology in Australia, see Chapters 6–8 respectively).

1.4. Indigenous Control and Cultural Heritage

The pervasiveness of Indigenous control over Indigenous cultural heritage is one of the main features distinguishing the practice of archaeology in Australia and should not be underestimated by anyone wishing to come and work here. All of Australia is Indigenous land, and all Indigenous archaeology as it is practiced here is conducted in collaboration with Indigenous peoples. This collaboration does not just exist at a theoretical level. The day-to-day reality of this means that Indigenous people are assumed (by government administering authorities and by archaeologists) to have the right of veto over all forms of archaeological work, irrespective of the scientific merits of the research as conceived by the archaeologist (see Australian Heritage Commission, 2002). In practical terms this means that in all states and territories of Australia, the permission of Indigenous people must be sought to excavate, collect, destroy, and in some cases survey for, and photograph, archaeological sites (see Chapters 5 and 6). The details of sites cannot be made public without Indigenous permission, and in some cases the administering body will only grant access to site registers or to site reports at the relevant Indigenous group's discretion. In some states this permission process even extends into the realm of historical archaeology (see Table 5.2).

1.5. How to Get Work in Australia

If you are reading this book because you harbor the desire to fund your next holiday to Australia by laboring on an archaeological excavation project, you may be in for a disappointment. Getting work as an archaeologist in Australia is not as simple as it may be in other parts of the world, which routinely conduct large urban excavations requiring large numbers of skilled laborers, thereby creating a constant market for short-term archaeological work. Most of Australia is not urbanised, it has a relatively small archaeological population, and large-scale excavations are not necessarily routine. This is not to say that work is unavailable here, just that you need to recognize the best ways to go about getting it.

The key thing to understand is the relatively small size of the archaeological community in Australia. There is no anonymity, as there is in the UK or North America. In Australia, everyone knows, or knows of, everyone else. Whether they like it or not, archaeologists are incorporated into an archaeological community, with both the benefits and drawbacks of community life. This means that it is not always easy for students or archaeologists from outside Australia to obtain work experience or employment here. The hardest part is making initial contact with someone who is willing to take you on and much employment is done by word of mouth, or through recommendations from colleagues. Our advice to people wishing to be involved in archaeology in Australia is to work through the archaeological community and, once you are in, to make sure you establish a good reputation. Word gets around. If, for example, you don't get on with someone working in Victoria, this could well affect your ability to find work in Queensland or Western Australia. One of the first things to do if you want to gain some valuable and unique experiences by working in Australia is to make contact with the archaeological community in such a way that they might be tempted to take you on.

Di Smith's Tips for Initiating Contact

If you're serious about working in any state or territory of Australia the most important thing to do is to identify yourself to your professional colleagues early in your visit. Really this is just professional courtesy, and will not only help people to become familiar with who you are and where your interests lie, but also allow you to understand the local situation and its protocols. This may not result in immediate work, but is the best opportunity to make invaluable (and hopefully lasting) contacts. As a first step, try introducing yourself to:

- The local chapter of AACAI.
- The relevant university archaeology department.
- The relevant state government heritage bodies.
- Any other local archaeological or anthropological societies.
- Local consultants or consultancy companies.

It is also a good idea to have a short curriculum-vitae (resumé) prepared so that people can see where your experience lies, or at the very least a business card so that people will remember you.

If you want to include oral history in your work/research you should contact the relevant state branch of the Oral History Association of Australia, Inc.* to obtain their guidelines for the transcription and retention of records.

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Your best route to obtaining work in Australia is through the cultural heritage management area of consulting archaeology. You are unlikely to obtain a job on an archaeological research project, unless you are well known to the researcher and have a specialization that will make you invaluable, simply because these

projects routinely are tightly funded and are not geared towards making money. Archaeological consultants, on the other hand, will often need labor to assist on their projects. They will also, however, be used to receiving requests for employment, and will be aware of the AACAI guidelines for employing people on archaeological projects (see <http://www.aacai.com.au/codeofethics.html>). Most archaeological consultants, particularly in the capital cities, routinely receive emails from people looking for work, which means that they will look for particular levels of qualifications, and combinations of appropriate technical skills and personal attitudes, when deciding whom to employ.

1.5.1. What You Need to Demonstrate 1: Technical Skills

Obviously being able to demonstrate relevant qualifications and basic archaeological fieldwork skills is an essential first step. Building on this, being able to demonstrate that you can do an archaeological assessment, including a survey of visible evidence, produce a readable report and interpret legislation will endear you to prospective employers (see “The Gojak list” below for more information). Because small firms almost never hire casual workers, it is going to be the larger CHM firms that are most likely to take you on. The archaeological work done by these kinds of firms is always linked to development and larger scale planning processes, so they will be equally concerned to see that you can make a commitment to a project/team, as well as be able to work independently when necessary. For this reason personal qualities are going to be just as important as technical skills, if not more so. If you need help with clarifying your role as an assistant or negotiating suitable employment conditions in a culturally appropriate way, take your cue from AACAI (<http://www.aacai.com.au/policies/assistants.html>).

Being a good cultural heritage practitioner, particularly if you’re intent on working as a consultant in Australia, means more than just being a good archaeologist. Cultural heritage management requires a far greater range of skills than most narrow archaeology degrees provide. This is not to say that you cannot have learnt all of this at university, but, even if you have, you must be aware that, as a professional cultural heritage manager, you will be required routinely to draw upon different types of knowledge. Denis Gojak’s list below, is, in one sense, a “checklist” for the range of skills and knowledge that a cultural heritage practitioner needs in order to be able to work effectively in Australia. You don’t need all of these, but the more you have, the more eminently employable you will be.

The ‘Gojak List’; or Denis Gojak’s Tips for Evaluating Your Performance as a Cultural Heritage Practitioner

As someone who has needed to use recent graduates as a consultant, and who has also been a public sector scrutinizer of consultants relying on student labor, I would think it was both wonderful and reasonable if those graduates could demonstrate a standard range of field skills and exercise a wide range of applied knowledge. Of course not everything will be relevant to every job and some of these skills won’t apply in some situations. Some of these, also, are skills

that can only be based in a knowledge of process rather than in the practice of doing. Nevertheless, can you:

Do a Bunch of Straightforward Technical Things to Help Fieldwork?

- Set up a string grid over an area so that all right angles are accurate and it is the correct dimensions.
- Find your location on a topographic map without a GPS.
- Use a compass and tape to record a large area to a reasonable level of accuracy.
- Set up a dumpy level properly.
- Follow instruction about what to record in your perfect grid (without necessarily knowing the intricacies or names of each object).
- Be able to draw up a simple site, like your perfectly gridded surface scatter, a rock shelter, or building floor plan.
- Know the basics of setting up a work area and be competent in “housekeeping” tasks, such as knowing you should grab some wood on your way back from having a piddle, etc.
- Write legibly on labels and field notes, even if you cannot do it in real life.
- Understand the difference between, and need for separating, recording and interpretation.
- Be able to describe things for which you do not know the names.
- Be able to take reasonable quality photos of sites and objects with scales, using digital and film cameras.
- Know why you are doing all these things.
- Be able to form a question and ask “why?” and “how?”
- Be able to introduce yourself to a local or a person associated with the site and explain what you want to do, and find out if they can tell you anything useful.

Do Some Straightforward Research and Writing?

- Use a word processing program.
- Know the names and locations of the main sources of relevant reports for the state or territory in which you’re working (this should include both Aboriginal and historical reports).
- Know how to ask for relevant reports (e.g. author, client, 1:250 K map name, local government area, etc) and how these are best retrieved from the different agencies who hold them.
- Know about the main research libraries for the state or territory in which you’re working.
- Be able to pull together an annotated bibliography using card catalogues, existing sources and internet search.
- Be able to pull together a land ownership history for a block of land or know where to go and how to do it.
- Write up the results of your field exercise so that it can be critically assessed and distinguishes fact from interpretation.

- Be able to prepare maps and illustrations and site drawings to a reasonable standard with compulsory north arrow, scale, date and legend.
- Be able to write up a report of your own or somebody else's data so that it is at least readable and coherent.
- Know why you are doing all these things.
- Be able to form a question and ask "why?" and "how?"

Add Value to the Data?

- Know the legislative basis for what you are doing in each state/territory.
- Be able to say what each act protects and how (by scheduling, blanket prescription, subject to a permit etc.).
- Know the Burra Charter's principles and methods.
- Be able to fill out a site register form or similar basic level document.
- Be able to make a reasonable stab at a statement of significance.
- Know how to use the significance assessment criteria in the EPBC Act or the state/Burra Charter equivalents.
- Know some basic conservation principles for sites, objects, records.
- Keep a time and job diary.
- Know why you are doing all these things.
- Be able to form a question and ask "why?" and "how?"

From a list originally published on AUSARCH, May 31st, 2004.

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1.5.2. What You Need to Demonstrate 2: Personal Qualities

The main quality that cultural heritage employers look for is a willingness to learn. It may be that many people intent on coming to Australia to work as an archaeologist have other plans for spending their time here, and so don't take too much time enquiring about work or representing themselves in the process. This is OK, but be prepared not to receive many answers if you simply adopt the "I am here, have you got any work?" attitude. Because of the centrality of Indigenous people to the archaeological process (see Chapters 2 and 6 for more information), cross-cultural skills and awareness are directly relevant to working successfully in Australia.

Jeannette Hope's Advice for Gaining Employment: The Advantage of Cross-Cultural Awareness

Like all consultants, I get bombarded with requests from both in and outside Australia. The issues are the same whether the people are local or from overseas. Because I run a one-person consultancy, I don't often have a position for an extra person—at least not a paid one—especially not for someone who simply says, for example, "I'll be in Australia for six months next year". Right now I have

no idea what work I will have next year. Taking on someone you've never met just on the basis of emails/letters is exactly the same situation whether they are local or not, although at least with locals you can always ring around and get a verbal reference.

I've only taken someone totally unknown on board once: I had a drop-out from a project team at the last minute, and coincidentally I got a letter from a local archaeologist (just graduated with Honours) asking for work. I rang him and negotiated—he could come, but on probation—and reserved the right to put him off within the first week if I wasn't happy. As it happened we got on and he worked with me on several jobs. But I didn't have continuous work for an extra person, and he used the experience and my reference to get a real job. What swung my decision to take him on was not his archaeological degree *per se*—I assume anyone with a degree has the basics and you have to train them up anyway—but the fact that he had spent some time in Indonesia working with locals as a volunteer on environmental projects. I was working in a politically sensitive area and the project involved a four week field camp with Aboriginal trainees. His cross-cultural experience was a plus.

Jeannette Hope lives at the junction of the Murray and Darling Rivers, and works on both Aboriginal and European archaeology and the history of the Murray-Darling Basin.

Other personal qualities are logical extensions of this attitude, such as determination, application, respect and responsibility. An interest in Australian heritage is also useful, and, again, expressing a willingness to learn will come in handy.

Denis Gojak's, Iain Stuart's and Esmée Webb's Tips for Making Yourself Employable

Denis. I get approached about once a fortnight or more by a travelling archaeologist from the UK or Ireland looking for work. Usually they are in Thailand, have worked out that Australia is their next stop and start emailing every firm in the Yellow Pages looking for work. As my company is basically me and one employee, and we don't do extravaganza digs, I don't really have any call for such people. Nearly all have fair to good excavation experience, which would be great if we were digging up Parramatta, but I doubt if any small firm takes any of them up. Most of the CVs are good, have no typos, don't look like they're gilding too many lilies etc. What stands out in the general run of requests is someone who can demonstrate they can do an archaeological assessment, including a survey of visible evidence, produce a readable report, interpret legislation and all that sort of stuff. That's in pretty short supply even among Australian graduates with a few years' experience, let alone those from overseas. The personal qualities that help would be to express a willingness to learn—it may have something to do with keeping yourself flexible in backpackry, but almost none of the CVs

and emails I get ever say this. The tone is pretty much “I am a dig bum, I want dig bum work”. This is not very enticing.

Iain. I am basically looking for a set of relevant skills (such as excavation experience) and some commitment to the project/team. Many enquiries I have received in the past (when I worked for HLA Envirosiences) seem to assume that because people have overseas education they are competent to do anything in Australia. This is despite Indigenous heritage work requiring a good knowledge of Aboriginal archaeology, an ability to identify artifacts, and experience in working with Indigenous communities. Most visitors lack these skills. Similarly for historical archaeology a basic familiarity with Australian history would seem relevant, even if Australia shares 19th and 20th century material culture with the world. Again, few casuals have these skills. While some visitors bring to the field new and relevant skills, many seem to treat our archaeology as a summer holiday job and a mere interruption in their partying. Appropriate personal skills would seem to be a focus on work during work hours, a sense of humor, and an interest in Australian heritage.

Esmée. Personally, I'd look for someone prepared to “rough it” a bit.

Someone adaptable, because fieldwork can go pear-shaped.

Someone prepared to make the most of every opportunity.

Someone willing to put up with my cooking.

Someone willing to get up at first light and work till dark.

Someone, ideally, able to drive off-road—or willing to learn.

Someone willing to LEARN—that is crucial.

I am interested in academic credentials, but equally interested in the fact that someone has had the guts to seek work in Australia. I've recently had two students from Sydney and am about to receive two students from UQ and they all find the “wild west” (Western Australia) quite different from anything they may have done “over east”. The Sydney students went home with their horizons enormously enlarged!!

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References and Further Reading

- Adcock, G.J., Dennis, E.S., Eastale, S., Huttley, G.A., Jermin, L.S., Peacock, W.J., & Thorne, A. (2001). Mitochondrial DNA sequences in ancient Australians: Implications for modern human origins. *Proceedings of the National Academy of Sciences*, 98(2), 537–542.
- Allen, J. (1983). Aborigines and archaeologists in Tasmania. *Australian Archaeology*, 16, 7–10.
- Allen, J., Golson, J., & Jones, R. (1977). *Sunda and Sahul. Prehistoric studies in Southeast Asia, Melanesia and Australia*. London: Academic Press.

- American Anthropological Association (1998). Code of ethics of the American Anthropological Association (April 2002). <http://www.aaanet.org/committees/ethics/ethcode.htm>.
- Australian Archaeological Association (1994). Code of ethics. *Australian Archaeology*, 39, 129. <http://www.australianarchaeologicalassociation.com.au/codeofethics.php> (14 December 2004).
- Australian Association of Consulting Archaeologists Inc (AACAI) (2005). AACAI recommended minimum fee scale 2004. <http://www.aacai.com.au/policies>.
- Australian Heritage Commission (2002). *Ask first: A guide to respecting Indigenous heritage places and values*. Canberra: Australian Heritage Commission. <http://www.ahc.gov.au/infores/publications/indigenousheritage/index.html#pdf>.
- Balme, J. (1995). 30,000 years of fishery in western New South Wales. *Archaeology in Oceania*, 30, 1–21.
- Balme, J., Merilees, D., & Porter, J.K. (1978). Late Quaternary mammal remains, spanning about 30,000 years, from excavations in Devil's Lair, Western Australia. *Journal of the Royal Society of Western Australia*, 61, 33–65.
- Barbetti, J. & Allen, H. (1972). Prehistoric man at Lake Mungo, Australia, by 32,000 B.P. *Nature*, 240, 46–48.
- Binns, R.A. & McBryde, I. (1972). *A petrological analysis of ground-edge artefacts from northern New South Wales*. Canberra: Australian Institute of Aboriginal Studies.
- Bradshaw, E. (2000). Mining and cultural heritage management: the Hamersley Iron experience. In I. Lilley (Ed.) *Native title and transformation of archaeology in the postcolonial world*, (pp.10–23). Oceania Monograph 50. Sydney: Oceania Publications, University of Sydney.
- Bruce, H. and Nish, S. (2005). Rio Tinto and Indigenous community agreement making in Australia. *Journal of Energy & Natural Resources Law*, 23(4), 409–510.
- Connah, G. (1988). *Of the hut I builded: Archaeology of Australia's history*. Cambridge: Cambridge University Press.
- Dampier, W. (1699 [1906]). J. Masfield (Ed.) *Voyages*. Vol II. London: E. Grant Richards.
- Davidson, I. (1992). Archaeologists and Aborigines. *The Australian Journal of Anthropology*, 2(2), 247–258.
- Davis, L. (1995). New directions for CRA. Speech to the Securities Institute of Australia, Melbourne/Sydney, March 1995.
- Flood, J. (1983). *Archaeology of the Dreamtime*. Sydney: Collins.
- Fullagar, R.L.K., Head, D.M., & Head, L. (1996). Early human occupation of northern Australia: Archaeology and thermoluminescence dating of Jinmium rock-shelter, Northern Territory. *Antiquity*, 70, 751–773.
- Hale, H. & Tindale, N. (1930). Notes on some human remains in the Lower Murray Valley, South Australia. *Records of the South Australian Museum*, 25, 1–12.
- Horton, D. (1991). *Recovering the tracks. The story of Australian archaeology*. Canberra: Aboriginal Studies Press.
- Kirk, R.L. & Thorne, A.G. (Eds.) (1976). *The origin of the Australians*. Canberra: Australian Institute of Aboriginal Studies.
- Jones, R. (1968). The geographical background to the arrival of man in Australia and Tasmania. *Archaeology and Physical Anthropology in Oceania*, 3, 185–215.
- Lourandos, H. (1983). Intensification. A late Pleistocene-Holocene archaeological sequence from southwestern Victoria. *Archaeology in Oceania*, 18, 81–94.
- McBryde, I. (Ed.) (1986). *Who owns the past?* Melbourne: Oxford University Press.

- MacPherson, P. (1884). The oven-mounds of the Aborigines of Victoria. *Journal and Proceedings of the Royal Society of New South Wales*, 18, 49–59.
- Meehan, B. (1983). *Shell bed to shell midden*. Canberra: Australian Institute of Aboriginal Studies.
- Mills, R. (2003). Understanding the spirit of place. *Review*, 68, 1–7. <http://www.riotinto.com/library/reviewmagazine/68/article4-6.aspx>.
- Mulvaney, D.J. (1961). The stone age of Australia. *Proceedings of the Prehistoric Society*, 27, 56–107.
- Mulvaney, D.J. (1990) [1957]. V.G. Childe 1892–1957. In D.J. Mulvaney (Ed.) *Prehistory and heritage. The writings of John Mulvaney* (pp. 160–161). Canberra: Department of Prehistory, Research School of Pacific Studies, Australian National University.
- Mulvaney, D.J. & Joyce, E. (1961). Archaeological and geomorphological investigations on Mt Moffatt Station, Queensland, Australia. *Proceedings of the Prehistoric Society*, 31, 147–212.
- O'Connor, S. (1995). 40,000 years of Aboriginal occupation in the Napier Ranges, Kimberley, W.A. *Australian Archaeology*, 40(1), 58–59.
- Pearce, R.H. & Barbetti, M. (1981). A 38,000-year old archaeological site at Upper Swan, Western Australia. *Archaeology in Oceania*, 16, 173–178.
- Roberts, R.G., Jones, R., & Smith, M.A. (1990). Thermoluminescence dating of a 50,000 year-old human occupation site in northern Australia. *Nature*, 345, 153–156.
- Roberts, R.G., Jones, R., & Smith, M.A. (1993). Optical dating at Deaf Adder Gorge, Northern Territory, indicates human occupation between 53,000 and 60,000 years ago. *Australian Archaeology*, 37, 58–59.
- Rosenfeld, A. (1988). *Rock art conservation in Australia*. (Special Australian Heritage Publication 2). Canberra: Australian Government Publishing Service.
- Roth, W. (1897) [1984]. *The Queensland Aborigines*. [In three volumes]. Carlisle: Hesperian Press.
- Smith, C. & Burke, H. (2003). In the spirit of the code. In L. J. Zimmerman, K. D. Vitelli & J. Hollowell-Zimmer (Eds.), *Ethical issues in archaeology* (pp. 177–200). Walnut Creek, CA: Alta Mira Press in cooperation with the Society for American Archaeology.
- Satham, E. (1892). Observations on shell-heaps and shell-beds. *Journal and Proceedings of the Royal Society of New South Wales*, 26, 304–314.
- Society for American Archaeology (1996). Principles of archaeological ethics (April 2002). <http://www.saa.org/Aboutsaa/Ethics/prethic.html>.
- Tindale, N.B. (1974). *Aboriginal tribes of Australia, their terrain, environmental controls, distribution, limits, and proper names*. With four sheet map. Berkeley: University of California Press.
- Thomson, D.F. (1939). The seasonal factor in human culture: Illustrated from the life of a contemporary nomadic group. *Journal of the Proceedings of the Prehistoric Society*, 5(2), 209–221.
- Ucko, P.J. (Ed.) (1977). *Form in indigenous art. Schematisation in the art of Aboriginal Australia and prehistoric Europe*. Canberra: Australian Institute of Aboriginal Studies.
- Ucko, P.J. (1983). Australian academic archaeology: Aboriginal transformation of its aims and practices. *Australian Archaeology*, 16, 11–26.
- Vitelli, K. D. (Ed.) (1996). *Archaeological ethics*. Walnut Creek, CA: Alta Mira Press.
- Wright, R.V.S. (Ed.) (1971). *Archaeology of the Gallus site, Koonalda cave*. Canberra: Australian Institute of Aboriginal Studies.
- Wright, R.V.S. (Ed.) (1977). *Stone tools as cultural markers. Change, evolution and complexity*. Canberra: Australian Institute of Aboriginal Studies.

Vitelli, K D. & Hollowell-Zimmer, J. (Eds.) (2003). *Ethical issues in archaeology*. Walnut Creek, CA: Alta Mira Press in cooperation with the Society for American Archaeology.

Key Guides and Resources

Archaeology World, at the Australian National University (<http://arts.anu.edu.au/arcworld/arcworld.htm>), has a range of useful links to archaeological resources in the Asia-Pacific region.

Australian Archaeological Association: www.australianarchaeologicalassociation.com.au. The national organization for those with an interest in Australian archaeology, representing a diverse membership of professionals, students and others. While the primary focus is Indigenous archaeology, there are also members who specialize in historical and maritime archaeology. AAA is a great starting point for beginning to understand Australian archaeology as a professional field.

Australian Association of Consulting Archaeologists Inc. (AACAI): www.aacai.com.au. The principal organization for archaeologists working in all fields of contract and public archaeology in Australia. Includes links to state chapters and electronic issues of the AACAI newsletter.

Australasian Society for Historical Archaeology: www.asha.org.au/. The principal membership organization for the study of historical archaeology in Australia, New Zealand and the Asia-Pacific region.

2

An Introduction to Indigenous Australia

The invasion of Australia by the British in 1788 is often portrayed as the beginning of the end of Indigenous cultures, but such colonial misconceptions should be seriously rethought. Today, it is clear that these cultures have survived. While they have undergone radical change in many parts of the country, Indigenous Australians have drawn upon the flexibility and strengths inherent in their cultures to ensure their on-going survival. The outcome has taken different shapes in different parts of the country, in the same way that Indigenous cultures had different shapes prior to contact with Europeans. The result is a diversity of Aboriginal Australian cultures in the present, as there was a diversity of these cultures in the past.

Australia's Indigenous population can be divided into two groups: Aboriginal people and Torres Strait Islanders. Taken together, they comprise around two per cent of the total Australian population. There are about 360,000 Aboriginal people and approximately 35,000 Torres Strait Islanders. Aboriginal people inhabit the mainland and many offshore islands, while Torres Strait Islanders come from the chain of islands between the tip of Cape York in Queensland and Papua New Guinea. The sovereignty of these two groups of Indigenous Australians is represented in their flags, both officially recognized by the Federal Government. Designed by Harold Thomas, the Aboriginal flag uses a pallet of three traditional colors: black, yellow and red. The people are symbolized by the black upper band, the land by the lower red band, while the life-giving sun shines on both. Attributed to the late Bernard Namok of Thursday Island, the central motif of the Torres Strait flag is a white head-dress, known as *dhari*. The five main island groups and the navigational importance of stars to these seafaring peoples are depicted by a white five-pointed star, the land and the sea are represented by green and blue bands, while black dividing stripes symbolize the people. These flags symbolize both the diversity and unity of Indigenous Australian cultures (see Figure 2.1).

Aboriginal and Torres Strait Islander people have distinct cultures and different, though inter-locking, histories. A common misconception held by the British at contact and long afterwards, is that all Indigenous Australians were a unified, relatively homogeneous group of people. Throughout the world European world-views consistently incorporated the diversity of individual Indigenous populations

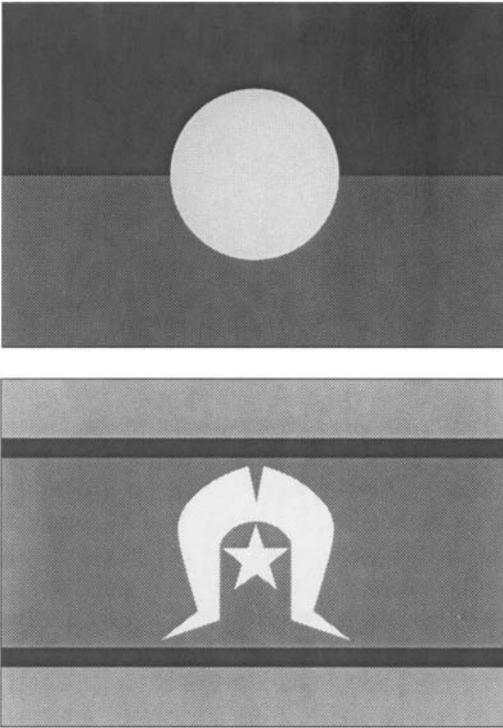


FIGURE 2.1. Aboriginal and Torres Strait Islander flags.

into a single category, such as “Indian”, or “Aboriginal”. This arose from, and reinforced, the colonial notion of Indigenous peoples as “other”—a notion used to justify different treatment of Indigenous and non-Indigenous peoples (for more information, see Preface).

In reality, at the time of British invasion there were around 200–250 different languages and 600 dialects spoken throughout Australia (Horton, 1994; Figure 2.2). Aboriginal people are born into a language group, acquiring this identity through a mixture of parentage and geographic location, in much the same way as others are born “Australian”, “American” or “Greek”. Membership of a language group affiliates people not only to each other but also to traditional tracts of land or “country”. If the parents come from more than one language group, the children are identified with both groups. When they are adults, they may chose to affiliate primarily to their mother’s language group, or to their father’s, or to both. For archaeologists or anthropologists dealing with land rights, this is an important issue, since it has direct bearing on the strength of people’s rights to land. The other point for archaeologists to note is that, since membership of a language group is acquired as a birthright, people affiliated with any particular language group are necessarily the direct descendants of forebears who also belonged to that language group.



FIGURE 2.2. Linguistic diversity in Aboriginal Australia (after Horton, 1994). Based on Tindale's original map this demonstrates the complexity of language groups across the continent.

This linguistic diversity engendered a cultural diversity similar to that of contemporary Europe, and most Aboriginal people were multilingual, as with people in Europe today. In Europe, linguistic and cultural differences became enshrined as national boundaries, providing tangible ways through which to identify social and cultural differences. A process of defining boundaries between different language groups also took place in Australia, but not in a way that non-Aboriginal people were able to recognize or understand. Aboriginal Australians were self-governed and politically autonomous. Firm boundaries were maintained through a refusal to trade or conduct social or political activities with particular groups of people, although people did not have contact equally in all directions. As in Europe, they looked to share cultural practices with people from certain directions, and not others. The archaeological evidence for this ranges from the trading patterns of exotic raw materials (i.e. those that are not native to a region), for example, where the trade of high quality stone might move up to 500 kilometres in one direction, but be restricted to short distances in another (Mulvaney & White, 1987:92), to a

regionalization in rock art styles (Layton, 1992). The cultural diversity of ancient Australia is now well documented by archaeologists.

A notion of Indigenous homogeneity masks not only the diversity of Indigenous cultures but also the political autonomy and processes of self-government that were in place in Indigenous societies prior to European invasion. In fact, there were extensive differences in the social organization and cultural practices of Aboriginal peoples across Australia at contact, differences continually reinforced and negotiated through language, art and ritual. The Indigenous societies encountered by the British contained some of the most complex and refined social structures in the world. The fact that Europeans assumed these people to be “backward” or “primitive” was a consequence of western notions of civilization, which judged as sophisticated only those societies that valued and produced an elaborate material culture with writing, monumental architecture and elaborate, socially stratified sedentary communities. In fact, the opposite was the case: the human intellect and energy that Europeans had put into building sophisticated and elegant material edifices were used by Indigenous Australians to build sophisticated and elegant social and intellectual edifices. The irony here is that Europeans were judging cultural complexity purely on the basis of material goods—and that the cultural, social and intellectual complexity of Indigenous Australian groups rivalled that of European cultures, either then or now.

2.1. Who Were the First Australians?

The distinctive appearance of Aboriginal and Torres Strait Islander people has prompted questions concerning their origins since the first European colonizers came to this part of the world. However, the search for the ancestors of Indigenous Australians is complicated by three factors: a scarcity of skeletal evidence, both in Australia and its nearest neighbor, South-East Asia; the difficulties involved in distinguishing between different populations and sexual dimorphism within one population; and problems of dating and interpretation.

We are confident that the initial colonizers of Australia were *Homo sapiens sapiens*, since these are the only human remains to have been found on this continent. Given its geographical proximity, the archaeological consensus is that these colonizers came from Asia, rather than Africa or the Americas (though both of the latter have been mooted at various times, beginning with Dampier in 1697). Today, the big questions are: where did Australia’s founding population come from? What did they look like? How many colonizing groups were there? And when did they get here?

One question that arises is how the presence of these first Australians articulates with more general models of human evolution. The two over-arching hypotheses about human evolution are known as the “Out of Africa” theory and the theory of multi-regional evolution. The first argues that *Homo erectus* and *Homo sapiens* successively came out of Africa to colonize Asia and Europe, with little, or no, interbreeding. The second theory argues that *Homo erectus* populations in Africa,

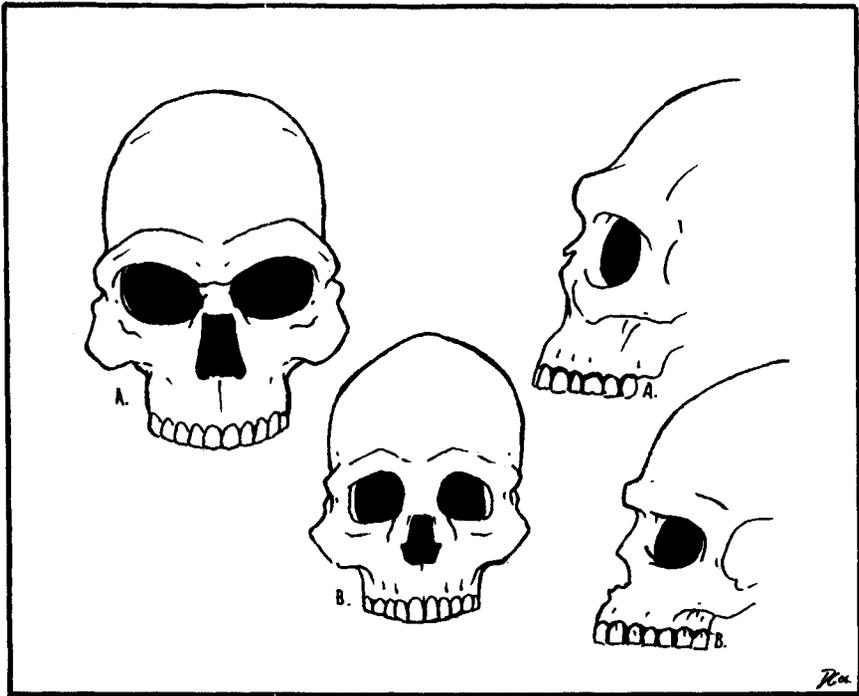


FIGURE 2.3. Robust (a) and gracile (b) people from Kow Swamp and Lake Mungo.

Asia and Europe evolved independently, and that each subsequently became a basis for the regional variation of contemporary populations. In terms of origins, an early date for *Homo sapiens* in Australia would challenge the Out of Africa theory, and support the arguments for multi-regional evolution, since it would suggest that *Homo sapiens* evolved independently in the Australasian region, as well as in Africa.

The origins debate that has dominated Australian archaeology, however, concerns the difference between robust and gracile looking people (Figure 2.3). The notion of two morphologically distinct colonizing populations was first put forward by Thorne (1976), who argued that the morphological differences were so great that each must have had a different point of origin: the “robust” group were descendents of *Homo erectus* from Java, Indonesia, whilst those of the “gracile” group came from southern China and, ultimately, a north Asian *Homo erectus* population. The robust group contains individuals from Kow Swamp and Cohuna in Victoria, while the gracile group contains individuals from Lake Mungo, New South Wales, and Keilor, Victoria. In an apparent reversal of normal evolutionary trends, which tend to move from rugged to gracile, the robust individuals from Kow Swamp, dated at around 10–13,000 BP (Thorne & Macumber, 1972), were much younger than the gracile-looking people from Lake Mungo, originally dated to $24,710 \pm 1270$ BP (Thorne, 1976), but more recently re-dated to “at

least 45,000 BP” (Bowler, 1998) and perhaps later (Adcock et al., 2001). Thorne (1976) argued that the “archaic” robust people arrived first, followed by the morphologically more “modern” gracile group, and that the people from Kow Swamp constituted a relict population which retained a high proportion of the original population’s physical features. Flood (1983:74) makes the point that the existence of two distinct human forms in Australia at the same time supports the idea of two colonizing groups.

Others, however, have disputed these interpretations. Brown (1996), in particular, contends that the morphological range in both the robust and gracile groups lies within the normal range of variation exhibited by any single human population. He argues that “at best” the gracile population consists of a single individual, Lake Mungo 1, and that the individuals known as Keilor and Lake Mungo 3 actually share terminal Pleistocene traits of relatively great size and robusticity. In opposition to Thorne’s notion of two colonizing populations, Brown’s position supports the notion of a single widely varied founding population, whose descendents included people from both Kow Swamp and Lake Mungo.

More recently, this debate has been complicated by the discovery of *Homo floresiensis* on Flores, an Indonesia island midway between Asia and Australia (Brown et al., 2004; Morwood et al., 2004, 2005). When Australian archaeologist Mike Morwood and his team unearthed the remains of eight individuals who were just one metre tall, they made a discovery with the potential to re-write human evolution. They estimate that these tiny people lived here from about 95,000 years ago until at least 13,000 years ago. In order to reach Flores from mainland Asia, these tiny humans would have had to cross two water barriers. To do this they would have needed a number of specific skills—the same ones needed to colonize mainland Australia.

2.2. Colonizing the Australian Continent

The Indigenous colonization of Australia occurred at a time when modern humans were just beginning to leave Africa and expand into the lands of Europe and Asia. While all human beings had the ability to make fire and to produce stone and wooden implements at this time, the Indigenous colonization of Australia is evidence of a major technological achievement, a first for humankind: the ability to build and navigate boats capable of crossing open sea between Indonesia and Australia. Moreover, this first colonization of the Australian region is highly significant to arguments about language origins and modern human behavior (see Davidson & Noble, 1992).

The most recent evaluations of radiocarbon dates for human occupation suggest that people were living throughout the Australian continent by 42,000–48,000 years ago (Bowler et al., 2003; Chappell, 2000; Gillespie, 2002). However, it is likely that colonization of the continent occurred slightly earlier than this, when sea levels in the region were at their lowest, at around 53,000 years BP. Even though many presently separated landmasses would have been joined together at

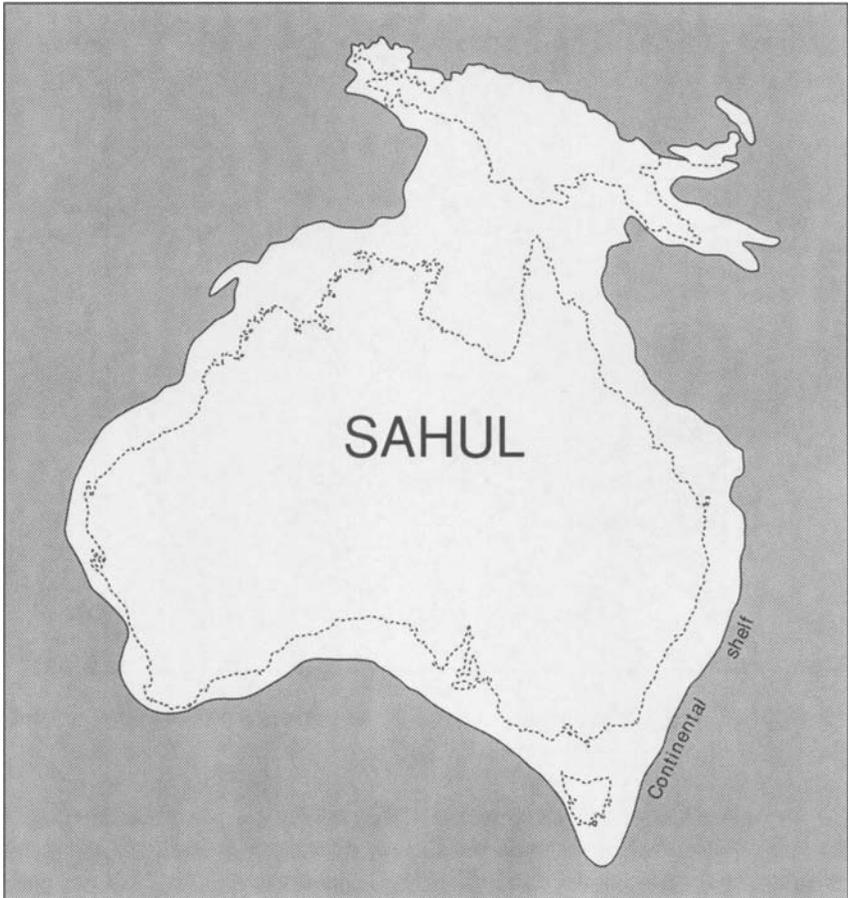


FIGURE 2.4. The Australian and New Guinea landmass (Sahul) at the time of low sea level (around 53,000 BP).

this time (Figure 2.4), there were still substantial bodies of water to be traversed. Even the shortest route would have entailed at least one trip, between Timor and the Kimberley coast, with a minimum distance of around 90 kilometres (55 miles) (Birdsell, 1977). This means that the colonizers would have been unable to see the lands they were travelling to, though birds and smoke from naturally occurring bushfires are likely to have indicated the presence of land. While it has been argued that this early colonization may have been accidental, for example through the result of fishing boats being blown off-course by strong winds, this is unlikely. Nor is it feasible that the colonization of the country could have arisen from the accidental arrival of a pregnant woman (Figure 2.5), as founding populations need a certain level of genetic variety to be viable. Perhaps even more importantly, they also need the social and cultural support that is provided by other humans.



FIGURE 2.5. How Australia was *not* colonized—by a pregnant woman on a log with a dog.

Once human beings have acquired a skill they are likely to use it regularly, and it is feasible that Australia was colonized on more than one occasion. Archaeological evidence for at least two waves of colonizers comes from relatively late evidence for another introduced species, the dingo. There is no evidence of the dingo in Australia before 3,000–4,000 BP (Gollan, 1980), and this animal would not have been able to make the necessary water crossings without human assistance. In our view, there are likely to have been a number of colonizing groups. Given the sea barriers they needed to cross, each group is likely to have consisted of a relatively small number of people. The genetic diversity present in modern Aboriginal people also suggests that there were a number of small founding populations, i.e. founder's effect (Kirk, 1983).

The Indigenous colonizers of Australia would have arrived with a well-developed maritime economy and it is likely that they depended on this during the early period of occupation. Bowdler (1977) developed a “coastal colonization” model for Australia, in which she argued that the early colonists would have used maritime economies and skills to populate the country, and that colonization would have occurred primarily around the coast of Australia and along major inland waterways (Figure 2.6). This has been much debated since then, partly on the basis of new archaeological evidence that now indicates that the colonization of inland Australia had occurred by at least 32,000 BP (Smith et al., 2001). While other

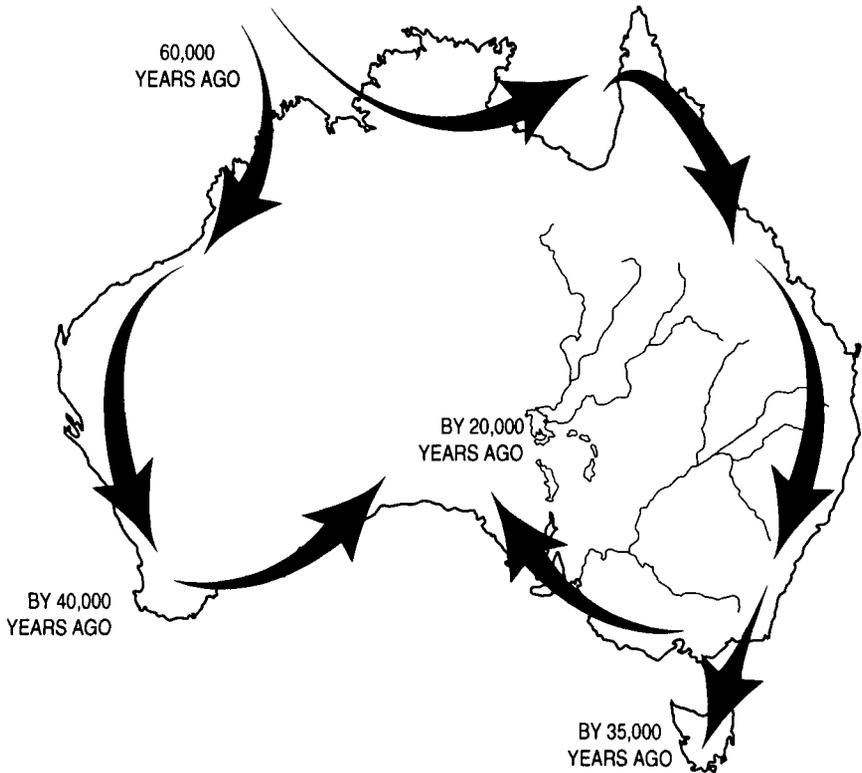


FIGURE 2.6. Bowdler's colonization model for Australia.

colonization models have been put forward which are also appealing (e.g. Horton, 1981; Smith, 1993; Veth, 1993), Bowdler's model still makes good sense, although the timing is likely to have been different to that which she originally envisaged. Most likely, colonization occurred on all fronts, but with greater alacrity around the coast (cf. White & O'Connell, 1982:51).

The environments occupied by Indigenous Australians were both diverse and subject to change. Over the last 50,000 years they have had to deal with the consequences of massive climatic changes, not only for themselves, but also in terms of the impact on native flora and fauna. These changes were a result of global fluctuations in temperature, which, when sufficiently massive, either froze or released water held in the polar ice-caps. This extraction or release of water changed the level of the seas globally. In the Australian region it either exposed or covered the continental shelf, radically altering the shape of the Australian continent. During the period when Australia is most likely to have been first colonized sea levels were much lower than they are today, and the continental landmass much larger. For much of the later Pleistocene, the islands of Australia, Tasmania and New Guinea were combined into a single landmass, known as Sahul (see Figure 2.4). The lowest sea levels occurred around 53,000 and 17,000 years ago, enlarging the

landmass of Australia by about one quarter, mostly in the region between Australia and New Guinea (Chappell, 2000).

By 30,000 BP, the regions's first colonizers had penetrated the high valleys of the central highlands of New Guinea (Pawley et al., 2006), had travelled from the far north of the Australian continent to the tip of southern Tasmania and had inhabited all but the most extreme of the country's environmental zones. The most extreme changes to the environment occurred around 18,000 BP, during the Last Glacial Maximum (LGM), when the climate became much drier, the deserts of central Australia expanded, and many parts of the continent were subject to drought or other constrictions of water availability (Mulvaney & Kamminga, 1999:114–119). Areas such as the Willandra lakes in present-day New South Wales were largely abandoned as people moved to large rivers, such as the Murray or the Darling. It is possible that some people retreated to coastal areas during this period, and that full use of the continent did not occur again until around 10–12,000 years ago (see Horton, 1981).

The global rising of the seas at around 10,000 BP caused a reduction of about one-fifth in the size of the Australian continent. Coastal areas, many of which are likely to contain archaeological evidence of initial colonization, became submerged. In the north, the islands of the Torres Strait formed from what had previously been a series of hills along a pathway from Cape York to Papua New Guinea. These environmental changes did not prevent contact between Australia and Papua New Guinea. In the south, however, Tasmania became isolated from the rest of the continent and contact with the mainland ceased.

At the time of contact, Tasmania had experienced around 11,000 years of independent evolution (Porch & Allen, 1995). The dingo did not reach Tasmania and neither did the invention of the spear-thrower. At the time of contact, Aboriginal people from Tasmania used only hand-thrown spears and clubs (White & O'Connell, 1982:19), and, unlike their mainland counterparts, did not use fish-hooks, game-nets, multi-pronged or barbed spears, boomerangs, or dugout canoes (Satterthwait & Arthur, 2005:49–55). These differences in material culture were accompanied by significant differences in religious practices and cultural behaviors, which have inspired much debate in Australian archaeology (e.g. Jones, 1977, 1978) (see Figure 2.7).

2.3. Symbolic Behaviors

The Indigenous colonization of Australia provides some of the earliest evidence for the emergence of fully human behavior. Like the maritime colonizers of the Pacific islands many thousands of years later, the achievements of these people were landmarks in the evolution of humanity. These achievements indicate the emergence of a number of uniquely human qualities: foresight, ability to plan, group co-operation, and courage. The ability to build a boat and successfully navigate to an unfamiliar place around 53,000 years ago may also be an indicator of the emergence of language (see Davidson & Noble, 1992; Noble &

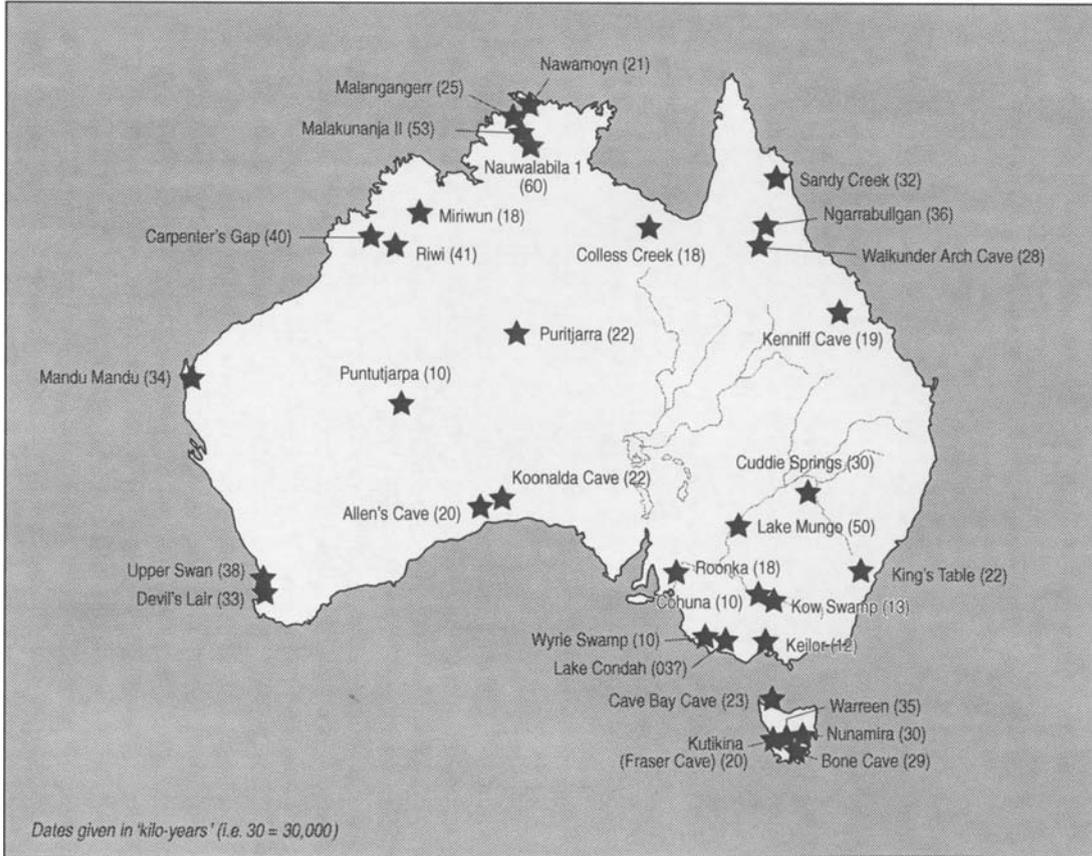


FIGURE 2.7. Major archaeological sites and their dates.

TABLE 2.1. Comparative timeline for Australia and Europe

	Europe	Australia
~60,000 years ago		Major sea crossing of at least 90 km/55 miles.
60–45,000 years ago		Deliberate cremation and ochre burials at Lake Mungo.
40–35,000 years ago	Beginning of the Upper Palaeolithic	Shell beads at Mimbi, traded from the coast.
35–30,000 years ago	Pendants, flutes and bracelets made by Cro-Magnon people. Art made at Chauvet Cave	Cone-shell beads made at Mandu Mandu.
30–25,000 years ago	Venus figurines made at Dolni Vestonice	Rock art made at Walkunder Arch Cave.
25–20,000 years ago		Ground edged axes made and used in northern Australia.
20–15,000 years ago		Bone beads made at Devil's Lair.
15–10,000 years ago		Artificial cranial deformation practiced at Kow Swamp.
10–5,000 years ago	End of the Upper Palaeolithic	Beginning of the Holocene. People at Roonka buried with bone necklaces and pendants. Wooden boomerang lost at Wylie Swamp.

Davidson, 1992, 1996)—and thus of symbolic communication—20,000 years before secure evidence of this is apparent in other parts of the world. Apart from this, there is evidence for many forms of symbolic behavior in Aboriginal Australia, including a number of “firsts” (see Table 2.1).

One of the earliest examples of elaborate burial practices in the world, including the first recorded cremation (Bowler et al., 2003:837), is apparent in the treatment given to the remains of a young adult female excavated at Lake Mungo, New South Wales, in 1969. Known as Lake Mungo I (and sometimes as Lady Mungo or the Mungo Lady), this young woman was interred using several processes. She was initially cremated, after which her bones were smashed before being carefully buried in a shallow pit. Radiocarbon dates initially placed this event at $24,710 \pm 1270$ years BP (Thorne, 1976) but later this was revised to “more than 40,000” (Bowler & Thorne, 1976) and then to “at least 45,000” (Bowler, 1998). The Mungo 3 burial, which was found in the same stratigraphic level as Mungo 1, is the world’s oldest ritual ochre burial (Bowler et al., 2003:837), and was recently re-dated using ESR, OSL and U-Series dating. This gave a result that placed both Lake Mungo 1 and Lake Mungo 3 (LM1 and LM3) at “about 60,000” year ago (Adcock et al., 2001), and, more recently, at 46–50,000 years ago (Bowler et al., 2003). The remains of Lake Mungo 3 has provided us with some of the earliest incontrovertible evidence for deliberate human burial and given Australian

archaeologists valuable insight into the lives of the country's earliest Indigenous inhabitants.

While a number of the Mungo burials had evidence for the use of red ochre, even earlier evidence for this has been found. At Malakunanja II, in the Northern Territory, pieces of striated ochre were found in levels dated to around 50,000 BP (Roberts et al., 1990). The dating for this site, however, has been disputed on the grounds of a discrepancy between radiocarbon and TL dates, and on the grounds that bioturbation may have moved artifacts through the sandy deposit to the lowest levels (Bowdler, 1990; Hiscock, 1990). A less contested find is that at Carpenter's Gap 1 shelter in the Kimberley, Western Australia, where ochre-covered rock has been dated to 40,000 BP (O'Connor & Frankhauser, 2001).

The emergence of a sense of personal identity is apparent in early body ornamentation. In Australia, the first indication of this was the discovery of three bone beads at Devil's Lair, dated to between 12,000 and 15,000 years ago (Dortch, 1984). Later, a 'string' of cone-shell beads were excavated at Mandu Mandu, Western Australia and dated to 32,000 BP (Morse, 1993). It may well be that this constitutes the remains of the oldest headband or necklace in the world. More recently, Balme's (2000) excavations at Riwi in the Kimberley also found beads dated to 30,000 BP, most likely traded as part of extended social networks. Other forms of body ornamentation have been discovered through the excavation of burials. The most well known site in this respect is Roonka, in South Australia, where formal burials began around 10,000 BP (Pate, 2006:235). At this site around 30 per cent of graves had evidence of personal adornment. The objects found included skin cloaks, bone pins, pendants and bead necklaces. In one grave, number 108, a young man was found with a double band of 75 matched pairs of wallaby teeth around his head. He was accompanied by a child of around seven years, who also had elaborate personal adornment, including a bead necklace made from snake vertebrae (Pretty, 1977). A recent review by Pate argues that the diversity of the material culture at Roonka provides evidence of "increased sedentism, greater intergroup competition, the maintenance of territorial boundaries and social ranking according to age and sex" (Pate, 2006:240).

Apart from this, there is evidence of other, permanent, forms of body ornamentation. Unlike temporary body art, these permanent forms would have informed the core identity of individuals throughout their lives. The most significant of these is artificial cranial deformation, which involves the binding or pressing of a baby's forehead to give it a flattened profile. This practice was observed in the last century in the Cape York Peninsula (Mulvaney & Kamminga, 1999:167), and may well have Pleistocene antiquity in Australia. When the remains from Kow Swamp were discovered, Brothwell (1975) suggested that the sloping foreheads on some of the remains may have been the result of artificial deformation. Following this argument, Brown (1981) compared the morphological characteristics of Aboriginal skulls from Coobool Creek, Cohuna and Kow Swamp with those of Arawe people from New Britain, in Melanesia, and found remarkable similarities in the features that indicate artificial cranial deformation. Brown's conclusions have been

disputed by Thorne (1989), who argues that these characteristics are part of the natural range of features in these populations. While this is still under debate, at present Brown's conclusions hold, making Kow Swamp 5, dated at around 13,000 BP, one of the earliest examples of this practice anywhere in the world.

It is rock art, however, that holds the clearest evidence for symbolic communication. There is enormous diversity in the kinds of rock art that exist throughout Australia (Figure 2.8). In the Sydney region there are rock engravings of fish and sea animals, as well as painted rock art (McDonald, 1992). In Tasmania much of the art is engraved in geometric circles and lines, but there are also rock paintings of Pleistocene age (Kiernan et al., 1983). There are many geometric and animal track engravings in the centre of Australia, part of an Australia-wide style known as the Panaramittee style (Maynard, 1974). In Cape York, Queensland, the most recent rock art is figurative paintings of people and animals (Cole, 2000; Morwood and Hobbs, 1992). In the Kimberley of Western Australia, there are distinctive Wandjina figures, paintings of the ancestors who lived at that place and whose spirits still reside there. Hand stencils, which signify a person's relationship to a particular place, are found throughout Australia (see Morwood, 2002). It should be noted that rock art has not stayed the same through time in any given region. For example, the Gwion Gwion/Bradshaw tradition of the Kimberley was augmented by Wandjina figures in the more recent past. Likewise, the Mimi paintings of Arnhem Land were augmented by X-ray images in later times (Morwood, 2002).

2.4. Changing People in a Changing Land

Australia is well known for its unique flora and fauna. While some aspects of this new environment may have been familiar to newly arrived groups, Australia's Indigenous colonizers would have come across many entirely new and unexpected species. How they developed new knowledge in order to cope with these changes and to survive successfully, and the repercussions of this for on-going human manipulation of the environment, is one of the most important aspects of Indigenous peoples' relationships to the land and to each other.

2.4.1. *Fire-Stick Farming*

One of the major ways in which Indigenous Australians manipulated their environment was through the practice identified by Jones (1969) as "fire-stick farming". This involved the regular burning of land in order to regenerate plant species and improve the habitat for game animals, which became more visible in the cleared environment. This firing had spiritual significance and promoted the growth of particular types of trees, producing new habitats in certain areas. In fact, a distinctive characteristic of the Australian flora is that so much of it is dependent on fire for species maintenance and regeneration, with some species critically dependent on this (Bowman, 1998). The mosaic patterning of areas regularly burnt at low level intensity allowed animals to escape, a sharp contrast to the devastating, high



FIGURE 2.8. “Typical” rock art around Australia. These motifs are some of the most distinctive, although rock art exists nearly everywhere in different forms.

intensity bush fires of more recent times. Fire-stick farming is part of a sophisticated system of knowledge that Indigenous people have developed in the many thousands of years they have inhabited Australia. Even though they had no system of land management that Europeans recognized as farming (i.e. no plant agriculture or domesticated animal food species), Indigenous people still managed the environment in such a way that none of it was truly “wilderness” (i.e. untouched by human presence) when Europeans arrived.

2.4.2. Megafauna

Most striking amongst the unfamiliar Australian fauna would have been the Australian megafauna (Figure 2.9). These were large marsupials, many of which became extinct after the Indigenous occupation of Australia. These species included a giant echidna called *Zaglossus*, the giant kangaroos, *Sthenurus* and *Procoptodon*, as well as the giant wombat, *Vombatus*, which was the size of a large car, and *Diprotodon*, a large browser around one-third the size of a normal house. Only one, *Thylacoleo*, the marsupial lion, was a meat-eater. These megafauna lived in all parts of Australia, in coastal, mountainous, tropical and desert environments.

The megafauna pose a mystery that is still unresolved. Many of them became extinct in the period from 45,000 to 12,000 years ago. If you accept the later dates

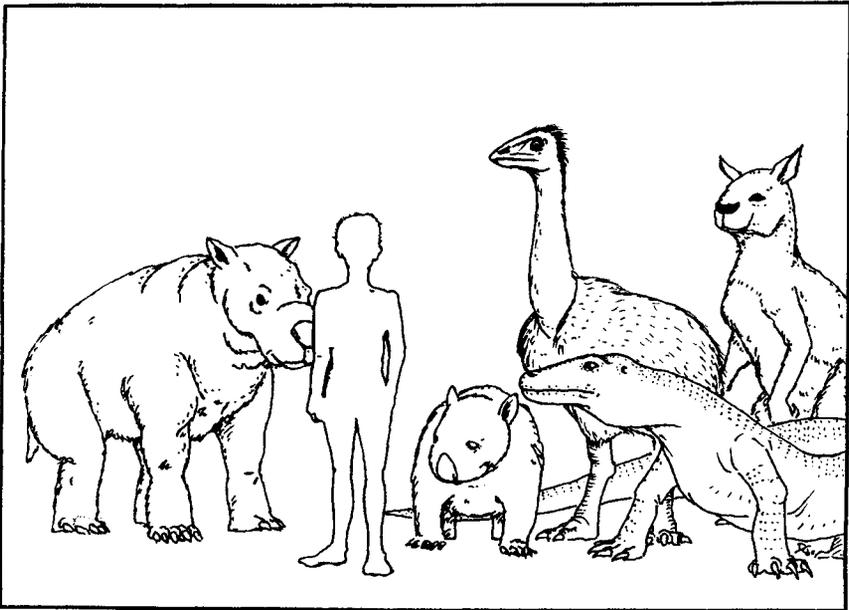


FIGURE 2.9. The main species of Australian megafauna (left to right: *Diprotodon optatum*; *Phascolonus gigas*; *Dromornis stirtoni*; *Megalania prisca*; *Procoptodon pusio*).

(and this is a matter of contention), this implies that the extinctions occurred well after the Indigenous colonization of Australia. Some suggest that Aboriginal people killed the megafauna, through hunting them to extinction, or through changing their habitats, so that the foods the megafauna ate were no longer available (e.g. Diamond, 2001; Flannery, 2002; Roberts et al., 2001). Some argue that the cause of death was climatic change, which affected the kinds of plants megafauna ate (Choquenot & Bowman, 1998), or a series of catastrophic droughts (Horton, 1981), while others argue for a mix of factors (e.g. Wroe et al., 2004).

The interactions between humans, megafauna and the environment have been a focus of much discussion in Australian archaeology, and have been assessed from a variety of standpoints. Horton (1981) contends that a succession of catastrophic droughts was the cause of megafaunal extinctions. These plant-eating animals would have needed to consume large quantities in order to get enough energy to live. In a drought their survival would have depended on their ability to walk between waterholes. Horton argues that the country around waterholes would have been eaten out, making the megafauna “ecologically tethered” to waterholes. They died from lack of food, not lack of water. Their K-oriented reproduction strategies (high individual parental investment in small numbers of offspring) would have exacerbated this vulnerability. Horton links the survival of small mammals to their greater ability to regulate body heat, an r-oriented reproduction strategy (low individual parental investment in large numbers of offspring) and ability to live on smaller amounts of water. One argument against this model is that the megafauna survived climatic changes earlier in the Pleistocene, though it could well be that the presence of humans changed this delicate ecological balance.

Recent estimates for the coexistence of humans and megafauna in Australia range from 10,000 to 40,000 years (Wroe et al., 2004), though most archaeologists (e.g. Diamond, 2001; Miller et al., 2005) discount dates after 45,000 BP, on the basis that none of the younger carbon dates are reliably associated with megafaunal remains. On the basis of an estimated period of extinction that occurred shortly after the estimated time of arrival of humans, Diamond (2001:756) argues for “one common ultimate cause” for these extinctions—overkill by humans—but many scholars dispute this interpretation (e.g. Choquenot & Bowman, 1998; Field & Fullagar, 2001). A different interpretation for similar patterning is put forward by Miller et al. (2005), who argue that human firing of landscapes in the more arid parts of Australia rapidly converted a drought-adapted mosaic of trees, shrubs, and grasslands to the modern fire-adapted desert scrub. Although coming from a different perspective, this argument supports that put forward by Jones (1975), who links the “fire-stick farming” of Aboriginal people to megafaunal extinction, suggesting that firing produced habitat change that threw megafauna into competition with previously non-competing species. However, Johnson and Prideaux’s (2004) analysis of the feeding ecology of megafauna belies arguments that attribute extinctions to environmental change, whether natural or human-induced.

2.4.3. *Economic Life*

While early European observers naively saw an unchanging people in an unchanging land, the archaeology of the Indigenous past shows several thresholds of substantial change occurring over the past 50,000 years. It is now clear that the occupation of the Australian continent was subject to on-going refinement, and occasionally to major change. Indigenous people had reached the southern glaciated parts of Tasmania by 35,000 BP (Cosgrove, 1989), and by 22,000 BP, they had inhabited all of the country's environmental zones, including desert areas (Veth et al., 2005). For at least 50,000 years, they proved themselves a dynamic and adaptable people, able to develop the skills needed to meet a wide variety of challenges, and with societies and cultures that were in an on-going state of "becoming".

One of the most important arguments concerning changes in the economic life of Indigenous Australians is that known as "intensification" or the more intensive use of economic resources and an increase in social complexity (see Lourandos, 1983, 1996; Ross, 1981). While there is much evidence for population movement, successful colonization and the development of a variety of subsistence techniques during the Pleistocene, there is little evidence of major technological change in Aboriginal Australia until the last 3–5,000 years, during the mid-Holocene. The most notable of these changes took place around 2–5,000 years ago, when there is evidence for refinements in existing technologies, new resource exploitation strategies, and the exploitation of a range of new food resources. Fundamental to this was a change in stone artifacts, shown in the development of a variety of small artifacts, with the stone worked in new and subtle ways. Because of their size, these artifacts were known as the Small Tool Tradition (Gould, 1969), but nowadays this concept is not widely accepted. Since many of these blades and points were used for woodworking or in the manufacture of composite tools, their manufacture suggests that there was a need for more intricate techniques, not only in the manufacture of wooden objects, but also in the combination of different materials to make composite tools. In some regions, there is evidence that some stone was curated much more carefully, indicating a concern with the more efficient use of important raw materials (Hiscock, 1986, 1994), and increased evidence for long-distance trading networks, sometimes spanning many thousands of miles (Binns and McBryde, 1972; McBryde, 1978).

The changes that occurred during this period, however, were subject to enormous regional variation, not only in timing but also in the range of technologies that were used by different Indigenous populations. New technologies were invented in different parts of the country, often related to the more effective exploitation of seasonal foods. In some places, this involved the building of stone structures, which depended on substantial investments of time. At Toolondo, in Victoria, for example, Indigenous people built stone walls, canals, traps and stone to facilitate the capture of eels, and increase their production at around (Lourandos, 1976). The walls of these stone canals were up to one metre in height and as long as 50 metres. Other canals were produced by digging out the basalt and removing loose or broken

rock, and were up to 300 metres in length. The traps were built on different levels and designed to come into operation progressively in order to take advantage of an increase or decrease in water levels. As Flood (1983:215) points out, this resourceful system was designed to catch the maximum number of eels with the minimum effort. The sophistication of these structures indicates the Indigenous occupants' knowledge of the hydrology of the lake. Moreover, the excavation and building of this system would have required substantial organization of labor—and is some of the earliest evidence in the world of the production of civil works and community management planning.

Many other innovations were developed around this time. Fish traps, for example, were made in various parts of the continent. Stone walls were constructed so that the fish became trapped when high water levels retreated. This damming of watercourses would have preserved fish populations during dry periods. While the technology used in such constructions was not as complex as at Toolondo or the nearby site of Lake Condah, these traps are still based on an intricate knowledge of fish habits and local hydrology. Substantial houses were constructed in parts of Victoria, and as these settlements grew in size, the people moved from a nomadic to a semi-nomadic lifestyle (Lourandos, 1996). This would not have been as dramatic a change as you might think, as it probably occurred across a number of generations.

In central Australia, grindstones were used to process seeds into flour for the first time in the mid Holocene (Smith, 1986), and skin bags for carrying large quantities of water made it more viable to move into arid areas in search of food. In north Queensland, yams and other root crops were replanted after harvesting, in a process not far removed from agricultural activity (Mulvaney & Kamminga, 1999:87). New and improved canoe designs allowed longer voyages, especially along both the east and west coasts of Cape York, and the exploration and exploitation of offshore islands. Throughout the continent fishing lines were created for the first time, from woven twine and shell fashioned into fishhooks (Bowdler, 1976). In parts of northern Australia, highly poisonous foods, such as *Macrozamia* nuts and other cycads, were made edible through complex methods of removing toxins, ranging from leaching to fermentation (David & Lourandos, 1997; Mulvaney & Kamminga, 1999:84).

The more efficient use of a wider range of resources can be linked to an ability to feed larger numbers of people that, in turn, can be linked to population growth and/or the ability to sustain extended ceremonial gatherings and increased social activity (see David et al., 2006). At the time of contact with the British, Aboriginal people throughout Australia had developed highly complex and sophisticated social structures and cultural practices. Ceremonies associated with the maintenance of these cultural practices were conducted over extended periods. For example, in Arnhem Land today ceremonies such as *Gunapippi* occur every two or three years, and each may last as long as six months. Clearly, the ability to sustain ceremonies of such magnitude rests on the provision of food for the main participants, whose normal subsistence behavior is constrained by ceremonial obligations. There is abundant ethnographic evidence of seasonal foods sustaining great ceremonial

gatherings. One of the best-known examples of this is the summer exploitation of the protein-rich bogong moths in the Australian Alps, a practice likely to have been carried out for at least the last few thousand years (Flood, 1976). Another example is the use of bunya nuts to support ceremonial gatherings in Queensland (Mulvaney & Kamminga, 1999:284).

The motivations for such great ceremonial gatherings are intriguing, and they would have been important for many reasons. At one level, there are likely to have been practical reasons, such as the propagation of particular plant or animal species, or the proper training of young people. Lampert (1980) suggests that the increased use of exotic raw materials for stone artifacts reflects an increase in inter-group exchange, as these materials are likely to have been traded during ceremonial gatherings. He also argues for an enhancement of the sacred associations given to some types of raw materials. At a level removed from this, but still with practical implications, the intense social bonding of such gatherings acted to reinforce both individual and group ties and to provide social safety nets. In desert regions, when ceremonies tended to be less frequent but of longer duration, such ties would have been particularly important, as people would have needed to call upon their neighbors' resources in times of environmental stress. Ceremonies were venues for the exchange of news and ideas, the arrangement of marriages, and the learning of new music, songs and dances. The distances travelled to attend these large gatherings indicate the importance of social networks to Indigenous people. Flood (1983:214), for example, records that Aboriginal people in the Australian Alps travelled up to 100 kilometres (60 miles) to attend ceremonial gatherings, though the bogong moths that supported these gatherings were freely available locally. In all parts of Australia, people would have routinely travelled great distances in order to maintain their social and ceremonial obligations.

Visual and performing arts were integral to the enactment of such ceremonies, contributing to the development of unique artistic traditions, each with regional variations. Such arts encompassed rock art and body designs, as well as dance, music and song. New rock art styles seem to have developed around this time, possibly related to an increase in territoriality, which itself may have been related to an increase in population (David & Chant, 1995; Smith, 1992). Such a regionalization of rock art "styles" is particularly evident in northern Australia (Morwood, 2002). Related developments included the production of ceremonial structures and objects, such as stone arrangements and carved trees. It is possible that during the Holocene period Indigenous Australians established the framework for the complex and sophisticated societies that existed on contact.

2.4.4. Trade and Exchange Networks

Trade and exchange were integral to ceremonial and religious affiliations. It is possible that the cultural networks developed during the mid-Holocene as part of social intensification helped to hasten the dissemination of ideas and materials throughout the country (see Lourandos, 1996). It is likely that the trading of items began in a small way, perhaps with the exchange of particularly high quality stone

or special ochres. By the time of European contact, however, a complex network of ceremonial and exchange networks had developed, spanning north to south and east to west (Figure 2.10). Some of these networks were thousands of miles in length, following the routes established by ancestral beings in the creation era known as the Dreaming (see below).

One of the most striking examples of such networks is that demonstrated by the movement of hatchet blades from greenstone quarries in the southeast of Australia. This work was conducted by Isabel McBryde, whose study of over two thousand hatchet blades demonstrated a close correlation between language groups and greenstone distribution (see McBryde, 1978), indicating webs of verbal communication, kinship and trade. While some objects were passed in family or secular contexts, others were passed only in ceremonial contexts. The need to maintain the socio-economic network can over-ride bonds of enmity—consequently exchange meetings, like other ceremonial gatherings, often start with a settlement of personal hostilities so that group activity will be unmarred by prior disputes (K. Akerman, email communication, March 5th, 2006). Sometimes, the objects moved well beyond the distances normally covered by a single individual. Pearl shells from the Kimberley region in Western Australia, for example, were traded as far as southern Australia (Akerman with Stanton, 1994), as were baler shells from Cape York (Akerman, 1973). The meanings attached to these objects changed as they traversed new grounds. For example, as they moved from north to south the pearl shells changed from being common objects used in public contexts, such as pendants, to being restricted objects used only in secret, ceremonial contexts (Akerman with Stanton, 1994; Mulvaney & White, 1987:93). Trade in such items existed in the late Pleistocene (O'Connor, 1997, 1999; Smith & Veth, 2004; Veth et al., 2005), and recent excavations by Balme have yielded evidence of beads made from a coastal shell species at the inland site of Riwi in the Kimberley, dated to around 30,000 BP. This indicates that wide spread social networks may have existed at this time (Balme, 2000:4), an important re-conceptualisation of Aboriginal societies during the Pleistocene.

Trade throughout the Torres Strait region occurred not only between the islands but also between New Guinea and the Australian mainland. Ideas and technologies skimmed throughout the region, facets of networks of enmity and amity (McNiven, 1998). While Aboriginal people in Cape York adopted the dugout canoe with outrigger, New Guinean people began to use spears and spear-throwers (Flood, 1983:233). Cultural and trading links across the Torres Strait produced a demand for Aboriginal shell ornaments and other items, in one direction, and for ceremonial objects, such as masks and drums, in the other (Mulvaney & White, 1987:95). Large canoes undertook long voyages down both the east and west coasts of Cape York as part of cultural and economic interchange. The cultures of Torres Strait were stylistically distinct, with regional variation akin to that of mainland cultures. There was a gradient of change across this region, with the islands closest to New Guinea stylistically most akin to New Guinean cultures and those closest to Australia most akin to Aboriginal cultures. Today, evidence of these cultural links is apparent in songs, dances, music and stories, as well as in the elaborate masks and head-dresses

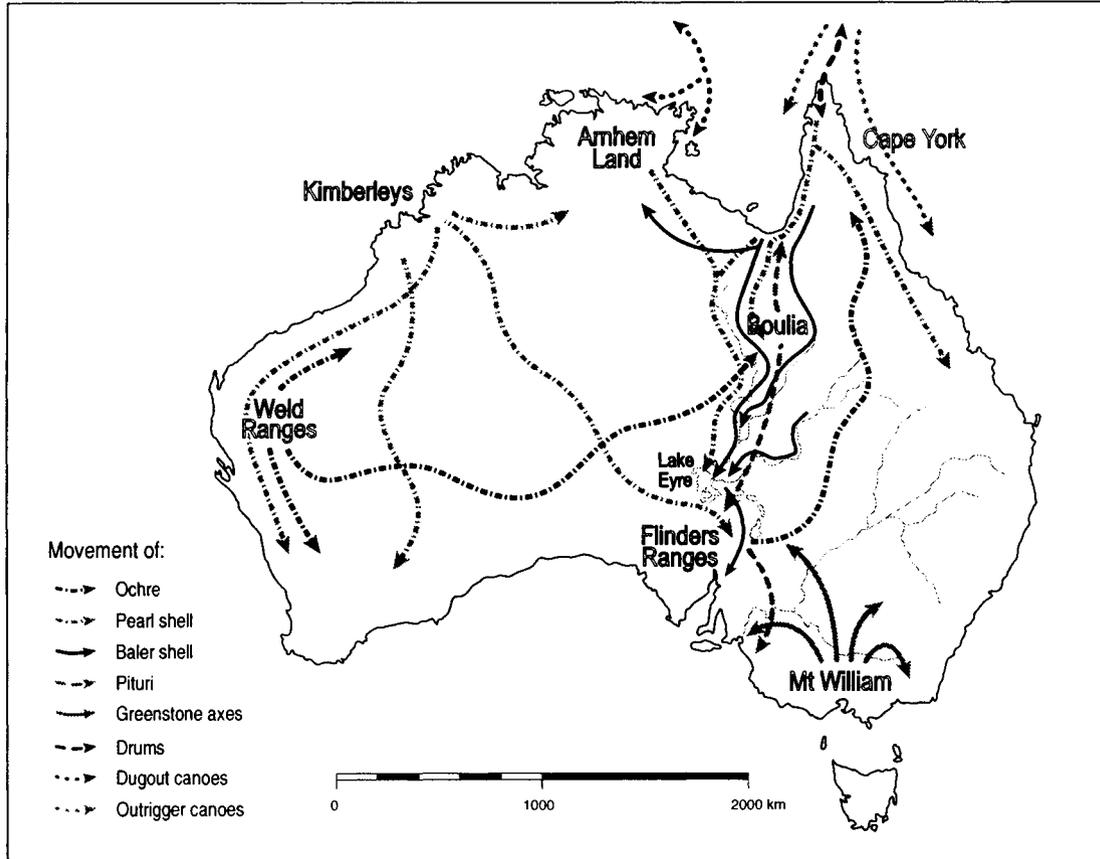


FIGURE 2.10. Some of the major Holocene trading routes across Australia.

worn in Torres Strait Islander ceremonies. The cultures of the Torres Strait can be placed along a spectrum between those of Australia and New Guinea, and acted as a maritime corridor of cultural and economic contact between the two regions.

While the Torres Strait Islands are sometimes seen as a boundary between agriculture and its absence (e.g. Baldwin, 1976), the situation was more complex than this. Certainly, one of the most striking differences between New Guinea and mainland Australia lies in the presence/absence of agricultural practices, particularly in the form of gardening (see Harris, 1995; Yen, 1995). In New Guinea, there is evidence of cultivation of taro, yam and banana and associated forest clearance in some parts of the central highlands from 10,000 years ago and this takes on a more systematic, agricultural character after about 7,000 years ago (Pawley et al., 2006). In the transitional zone of the Torres Strait, however, choices were made pragmatically, according to the needs of the particular time. In good seasons, the islanders were unlikely to make gardens but they would do so in difficult seasons (Moore, 1979:279). Europeans sometimes wonder why Aboriginal Australians did not take up cultivating plants and herding animals. Even in the northernmost islands of the Torres Strait the use of agriculture was sporadic, possibly due to the influence of alternative lifestyles in the south, and while there was diffusion of plant species this did not result in the adoption of agriculture or stimulation towards domestication among the Aboriginal peoples (Yen, 1995). While it is true that the native flora and fauna of Australia are not particularly well suited to domestication, this is not sufficient explanation. The fact that Australian Aboriginal people did not take up domestication, despite many of them having knowledge of these practices, suggests a refusal to give up a comfortable lifestyle. The “failure to adopt agriculture” was actually a conscious choice to pursue a non-agricultural lifestyle.

2.5. The Dreaming

The rules that govern Aboriginal cultures are embedded in the Dreaming, or Dream-time (see Glossary), a creation era that still exists in the present. Aboriginal and Torres Strait Islander people inhabit landscapes that are full of meaning, inherently powerful and potentially dangerous. During the creation era known as the Dreaming, ancestral beings travelled throughout the lands, creating its topographic features through their actions. Finally, “sitting down” in one place, they became a living part of that place forever.

Within the Aboriginal cosmos, power flows from these ancestral beings to the land, which in turn is imbued with a potency given to it by the actions of past people and ancestors. In this way, every facet of the landscape became imbued with ancestral associations and ascribed with social identity. Finally, the power flows through to living people, although people do not see themselves as having power in their own right. Rather, they see themselves as having the ability to call upon the power which is held by the ancestors and which permeates the land. Often features of the land are believed to be the physical features of a particular

being, permanent commemoration of their past actions and on-going presence in the landscape. The most important thing for outsiders to recognize is that the Dreaming is both “then” and “now”. It encompasses events of the ancestral past, but also exists in the present.

As they traversed the land during the Dreaming, the ancestral beings established the bases of two vital social systems: Dreaming tracks, which link places and people, and kinship systems, which codify who the people are. Dreaming tracks form the religious basis for extended communication and trading networks among Aboriginal people. Some Dreaming tracks span the entire Australian continent. For example, one stretches from north-east Arnhem Land in the Northern Territory through central Australia to the South Australian coast—a distance of 3,000 kilometres (1,800 miles). The actions of the ancestral being who travelled this Dreaming track spiritually link all of the people who live along that route. There are many different Dreaming systems across Australia, as not every group had the same belief system. While there are tracks that link Dreaming places, there are also other kinds of Dreaming-scapes, such as clan estates, that are locally focussed, or connect Dreaming sites within a particular region. Not all Dreaming places are part of tracks: the ancestral beings also established systems that directed the affiliations of land, ancestors and people at a local level. The important point to remember is that many Dreaming sites, both those that are locally focussed and those that are part of tracks, are identified as being both potent and dangerous, and that there are important cultural rules concerning behavior at, or near, these sites.

Indigenous Australian kinship systems are highly complex and mathematically precise, and are recognized by anthropologists as being among the most complex recorded anywhere in the world. Kinship relationships structure the affairs of people within a social group, as well as between groups of people and between people and their lands. Notions of personal identity are closely linked to social constructions of the land, and these inform patterns of Indigenous land-use. The social identities of people and places can be articulated in a number of ways, primarily through language group, moiety, clan and gender. Throughout Australia, Aboriginal people have a diverse range of ways in which they relate to place. These relationships exist in spite of, and in some cases in response to, the pressures arising from European colonization. The common thread is an enduring sense of Aboriginality as inextricably linked to place and the mediation of land-use patterns in terms of spiritually powerful and dangerous places.

2.6. First Contacts

At some time during the 16th and 17th centuries, fishermen from Indonesia began to visit the northern coastline of Australia. Their ships came from several different islands, including a base on Sulawesi, Macassar, hence “Macassan” is the general term used to describe them. The Macassans were seasonal visitors who

came to harvest trepang, or bêche de mer—a sea slug much valued as a delicacy, or as an aphrodisiac—and in the process developed cordial relationships with the Aboriginal peoples along the coastline, who were also fishermen. Given our understanding of Indigenous sea rights today (Aboriginal & Torres Strait Islander Justice Commissioner, 2000, Chapter 3; Northern Land Council, 2006), it is likely the Macassans had to pay Aboriginal people—almost certainly in kind—for the use of their traditional fishing grounds. Unlike later European visitors, Macassan people did not build permanent dwellings or try to stake out Aboriginal lands for themselves, although they did camp along the coastline. The visits of the Macassans appear to have been peaceful and even welcomed. They are recorded in stories and songs, in the rock art that depicts Macassan boats, and in the numerous Macassan words that became part of Aboriginal languages along the northern Australian coast. Much in the way that links were formed with the peoples of Torres Strait through gradual cultural exchange, so, too, were they with people from the southern part of Indonesia (see Clarke, 2000; MacKnight, 1986).

During the 17th and 18th centuries, maritime expeditions set out from many European countries seeking to explore, exploit and encompass other parts of the globe. The major European players were the Spanish, Portuguese, French, Dutch and British. The first European visitors to Australia were the Dutch and the Spanish. The first vessels to land on Australian soil did so in 1606. These were a small Dutch ship called the *Duyfken*, captained by Willem Janszoon, which landed along the western side of Cape York Peninsula, and the Spanish ship *San Pedro*, which was commanded by Luis Vaez de Torres. Torres was the first person to successfully navigate the passage between New Guinea and Cape York Peninsula, and the Torres Strait was named after him. This was the period when the Dutch were colonizing Indonesia, and their navigation strategies involved heading west across the Indian Ocean until they arrived in Australian latitudes and then turning north towards Indonesia. During this period there were also visits by the French and British. A number of these ships made contact with the Aboriginal people who lived along the Australian coastline, especially in the north and west. Unlike the Macassans, European visitors were unable to establish amicable relationships with Aboriginal people, and record that their visits were opposed. In fact, every European visitor met resistance from Aborigines, up to and including Captain Cook, who circumnavigated Australia in the *Endeavour* in 1770. None of these visits aimed to establish relationships with Aboriginal people. Instead, they were either peripheral to a main aim, such as colonizing Indonesia, or sorties designed to scout out the potential of Australia for colonization, exploitation of resources and settlement. Since these early visits were not aimed at establishing relationships, Aboriginal people are unlikely to have dwelled on them, though they would undoubtedly have had an impact (for a recent consideration of such colonial encounters through Aboriginal eyes see Dyer, 2005). While these visits are occasionally recorded in rock art, they are not evident in either material or archival evidence of substantive trade, or recorded in Aboriginal languages. At the time, these visits appear to have had little impact upon Aboriginal Australians—but their consequences were dire.

2.7. Conflicting Knowledge Systems

There are many significant differences between Indigenous and Western knowledge systems (Smith & Burke, 2003), which, among other things, can cause conflicts in interpretation, the application of management practices to sites and the use of Indigenous knowledge. An understanding of the fundamental principles underlying Indigenous knowledge systems is critical to archaeological activity in Australia. Here we concentrate on those aspects that are particularly relevant to archaeologists: restrictions on knowledge; notions of time; and conceptions of space. This issue is discussed further in “Indigenous Heritage and Conservation Issues” in Chapter 9.

Grounded in the fluidity and flexibility of oral traditions, Indigenous knowledge systems recognize an abundance of social distinctions, restrictions and inter-connections. Indigenous knowledge is rarely definitive (in the sense that there is only one “right” answer), and is often restricted. Knowledge has many levels and is not “open” in the sense that all people have an equal right to acquiring that knowledge. Instead, knowledge is kept in the custody of people who have appropriate qualifications and personal qualities, usually based on age and seniority, and its distribution is at their discretion. There is great respect for senior traditional owners and custodians, the holders of traditional knowledge, often referred to as Elders. As with other societies with oral traditions, the continuity of cultural practices rests with these people. Often, only a few will know the knowledge that is most critical to the survival of the group, and the right to knowledge has to be earned by each individual. This has direct implications for archaeological practice, particularly in terms of how you can get information on the Aboriginal significance of sites (for detailed discussion of this issue and its practical implications, see “Ethical Issues in Indigenous Archaeology”, in Chapter 6).

Another important difference between Indigenous and Western knowledge systems concerns how people conceptualize time. Whereas Western notions of time are linear (Figure 2.11), with the past constructed as being in continuous separation from the present, Indigenous conceptions of time emphasize inter-connections between past and present, and view the past as impacting actively upon the present. The past is never past. Ancestral beings and the spirits of dead relatives inhabit contemporary landscapes, monitoring the appropriate ways in which country can be used. Natural signs, such as birds or floods, are taken as indicators of their views and wishes, and people’s behaviors are modified accordingly.

Differences in Western and Indigenous notions of time are evident in the current debate over reconciliation. While some Australians hold that they are not responsible for the actions of their forebears—a linear view—many Aboriginal people argue that the actions of the past must be confronted and reconciled in the present. Schooled in a tradition of collective ownership and a notion of the past continuously impacting upon the present, Aboriginal Australians maintain that European Australians are, in one sense at least, collectively responsible. From an Indigenous viewpoint, not only have European Australians inherited the benefits

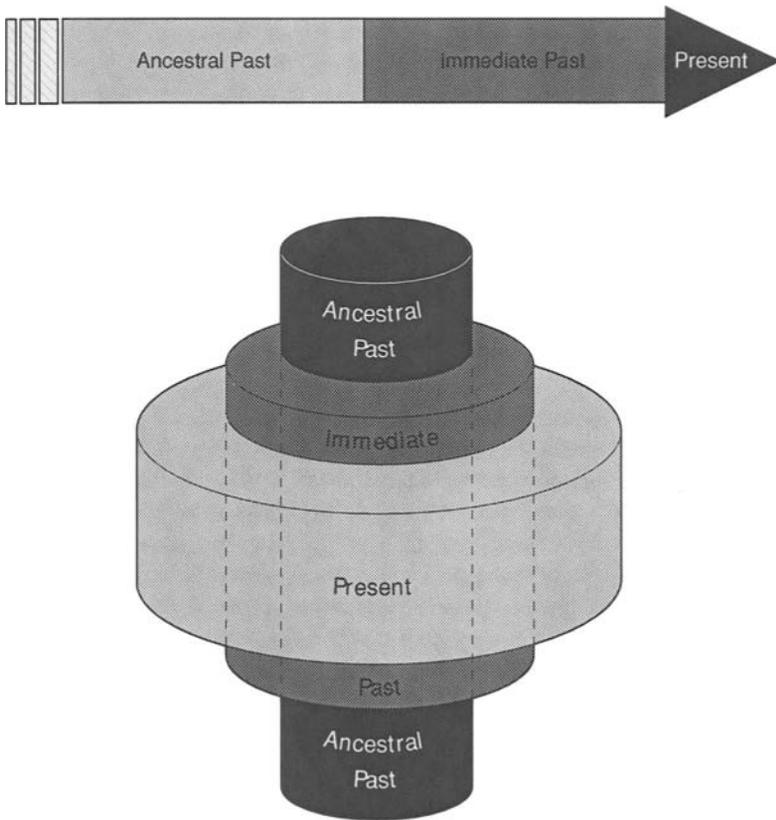


FIGURE 2.11. European (top) and Indigenous (bottom) notions of time.

of the actions of their forebears, they also bear a responsibility to redress the wrongs they perpetrated.

There are comparable differences in Western and Indigenous conceptualizations of space. Where Western notions of space emphasize the delineation of boundaries, Indigenous notions of space emphasize the inter-relationships that exist between places and peoples, as laid down during the Dreaming. Indigenous places always exist in relation to other Indigenous places. In terms of land management this means that each individual site has to be managed as a small facet of a wider cultural landscape. What happens at one site will impact upon other sites within a web of inter-relationships that can span the entire country and extend into territorial waters. This is not to say that Indigenous Australians do not have a traditional conception of bounded areas. Sharp, linear boundaries do occur in some places, usually facilitated by clear geographical delineations such as rivers. Overall, though, Indigenous land boundaries are diffuse and Indigenous conceptions of territory are focused on the core areas that are indisputably owned by particular groups, rather than on the

lines that delineate the territories between them (see Hiatt, 1987). The potential gulf between Indigenous and European notions of territory is apparent in the way the transition between land and sea is conceptualised in each society. While Europeans draw a sharp distinction between the two, Indigenous conceptions of traditional “country” is such that land and sea are envisaged as parts of a continuum (Aboriginal & Torres Strait Islander Justice Commissioner, 2000).

Many of the places important to Aboriginal people appear simply “natural” to people of European descent. Lacking visible artifacts, the reasons behind their importance may not be readily apparent. The successful management of such places has posed a challenge to conventional cultural heritage management strategies, since archaeological recommendations are consistently based on a distinction between space and place, or nature and culture. Such a separation is not a part of Aboriginal constructions of the land. From an Aboriginal viewpoint, the Australian continent is traversed by Dreaming tracks, which link the spaces between a succession of place-based events that occurred during the creation era. Thus, the individual locales encoded in stories are linked to other places within, and outside, the region. Considered together, the flexibility of Indigenous notions of time and space views the landscape as an interconnected whole that is well beyond the sum of its parts. Indigenous people tend to view sites at this landscape level of abstraction, rather than in the spatially bounded sense commonly understood by Europeans. From an Indigenous viewpoint, detrimental effects to one part of the cultural landscape can affect all other parts of it.

While archaeologists have learnt much about Australia’s Indigenous past, we are still addressing many fundamental questions—when did Aboriginal people first arrive in Australia? Where did they come from? How did they live when they got here? While we now have some answers to most of these questions, there are still many areas of debate and new interpretations are constantly emerging in response to new data. Nevertheless, it is clear that ancient Australians achieved a great deal. They learnt to live in every part of Australia, evolving different cultures and developing specialist technologies to do so, in the process establishing frameworks from which their descendants would develop dynamic, complex and sophisticated societies that would endure beyond contact.

Daryl Guse’s Advice for Working With Sacred Sites in the Northern Territory

- Indigenous cultural heritage is manifested in many ways in the Northern Territory. A major part of indigenous cultural heritage is formed by places that are significant according to Aboriginal tradition, otherwise known as “sacred sites”. These are places that occur across the land and sea and usually have mythological and totemic significance to local Aboriginal groups. These places are protected under the *Aboriginal Land Rights Act 1976* and the *Northern Territory Aboriginal Sacred Sites Act 1989*.

- It is very important for researchers to be aware of, and respect, the traditional laws and bonds that Aboriginal groups have with “country”. Being respectful means establishing a dialogue with local Aboriginal groups in the region you are interested in working, and following community protocols. This can be achieved through the following types of agencies:
 - Aboriginal Land Councils.
 - Local indigenous organizations, such as land management associations and community government councils.
- Indigenous communities in the Northern Territory are increasingly interested in participating in “caring for country” projects. Your project should be designed to involve the local Traditional Aboriginal Owners beyond just consultation for permission. In this way, researchers will find that access to places that are sacred sites may become possible, something that is especially important for rock art research and studying cultural landscapes. Also this will contribute to an important knowledge-sharing process between the researcher and the indigenous community.
- Although permission to excavate an archaeological site is sought through the *Heritage Conservation Act 1991*, it is usually necessary in the application to provide documentation that the site is not a sacred site, or that consent has been given under the *Aboriginal Land Rights Act* or the *Northern Territory Sacred Sites Act 1989*.
- This can be achieved through the Aboriginal Areas Protection Authority* (AAPA). A first level check can be provided through a Register Inspection (map extract) of the Sacred Sites Register (for a small fee), which will alert researchers to whether there are any previously recorded sacred sites in their area of interest. The AAPA also provides a service to the community by issuing exemption certificates (known as Authority Certificates) through a process of consultation with Aboriginal custodians for any proposal that may require work or access to a sacred site. These certificates can only be issued with the consent of Aboriginal custodians. Fees for an Authority Certificate will also apply. It is important to note that the Aboriginal custodians of a sacred site may not necessarily be the traditional landowners because of the nature of Aboriginal social organization. Although you may be working with the traditional landowning group, consent may also need to be sought from other neighboring groups.
- Although Indigenous consultation and participation may seem complex and time consuming, many successful research projects are occurring in the Northern Territory. Government agencies and other organizations exist to assist with this process and the keys to success are planning, consultation, and developing good cross-cultural communication.

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References and Further Reading

- Aboriginal & Torres Strait Islander Justice Commissioner (2000). *Native Title report 2000*. Canberra: Commonwealth of Australia. http://www.hreoc.gov.au/social_justice/nt_report/index.html.
- Akerman, K. (1973). Aboriginal baler shell objects in Western Australia. *Mankind*, 9(2), 1245–125.
- Akerman, K. & Stanton, J. (1994). *Riji and Jakuli: Kimberley pearl shell in Aboriginal Australia*. Darwin: Museums and Art Galleries of the Northern Territory.
- Adcock, G. J., Dennis, E.S., Eastaer, S., Huttley, G.A., Jermin, L.S., Peacock, W.J., & Thorne, A. (2001). Mitochondrial DNA sequences in ancient Australians: Implications for modern human origins. *Proceedings of the National Academy of Sciences*, 98(2), 537–542.
- Baldwin, J.A. (1976). Torres Strait: Barrier to agricultural diffusion. *Anthropological Journal of Canada*, 14, 10–17.
- Balme, J. (2000). Excavations revealing 40,000 years of occupation at Mimbi Caves, south central Kimberley. *Australian Archaeology*, 51, 1–5.
- Binns, R.A. & McBryde, I. (1972). *A petrological analysis of ground-edge artefacts from northern New South Wales*. Canberra: Australian Institute of Aboriginal Studies.
- Birdsell, J.B. (1977). The recalibration of a paradigm for the first peopling of greater Australia. In J. Allen, J. Golson, & R. Jones (Eds.), *Sunda and Sahul: Prehistoric studies in south-east Asia, Melanesia and Australia* (pp. 113–167). London: Academic Press.
- Bowdler, S. (1976). Hook, line and dilly bag: An interpretation of an Australian coastal shell midden. *Mankind*, 10(4), 248–258.
- Bowdler, S. (1977). The coastal colonisation of Australia. In J. Allen, J. Golson, & R. Jones (Eds.), *Sunda and Sahul: Prehistoric studies in southeast Asia, Melanesia and Australia* (pp. 205–246). New York: Academic Press.
- Bowdler, S. (1990). Some sort of dates at Malakunanja II: A reply to Roberts et al. *Australian Archaeology*, 31, 93.
- Bowdler, S. (1992). Unquiet slumbers: The return of the Kow Swamp burials. *Antiquity*, 66, 103–106.
- Bowler J. M. (1998). Willandra Lakes revisited: Environmental framework for human occupation. *Archaeology in Oceania*, 33, 120–155.
- Bowler J. M. & Thorne, A. G. (1976). Human remains from Lake Mungo: Discovery and excavation of Mungo 3. In R.L. Kirk & A.G. Thorne (Eds.), *Origins of the Australians* (pp. 127–138). Canberra: Australian Institute of Aboriginal Studies.
- Bowler, J.M., Johnston, H., Olley, J.M., Prescott, J.R., Roberts, R.G., Shawcross, W., & Spooner, N.A. (2003). New ages for human occupation and climatic change at Lake Mungo, Australia. *Nature*, 421, 837–840.
- Bowman, D.M. (1998). The impact of Aboriginal landscape burning on the Australian biota. *New Phytologist*, 140 (3), 385–410.
- Brothwell, D. (1975). Possible evidence of a cultural practice affecting head growth in some Late Pleistocene East Asian and Australasian populations. *Journal of Archaeological Science*, 2, 75–77.
- Brown, P. (1981). Artificial cranial deformation: A component in the variation in Pleistocene Australian crania. *Archaeology in Oceania*, 16, 156–167.

- Brown, P. (1996). Human origins and antiquity in Australia: An historical perspective. In F. Spencer (Ed.), *History of physical anthropology* (pp. 138–145). New York: Garland Publishing.
- Brown, P., Sutikna, T., Morwood, M., Soejono, R.P., Jatmiko, Saptomo E.W., & Due, R.A. (2004). A new small-bodied hominin from the late Pleistocene of Flores, Indonesia. *Nature*, 431, 1055–61.
- Choquenot, D. & Bowman, D.M.J.S. (1998). Marsupial megafauna, Aborigines and the overkill hypothesis: Application of predator-prey models to the question of Pleistocene extinction in Australia. *Global Ecology & Biogeography*, 7 (3), 167–180.
- Clarke, A. (2000). The 'Moormans Trousers': Macassan and Aboriginal interactions and the changing fabric of indigenous social life. In S. O'Connor & P. Veth (Eds.) *East of Wallace's Line: Studies of past and present maritime societies in the Indo-Pacific region* (pp. 315–337). Modern Quaternary Research in Southeast Asia 16. Rotterdam: A.A. Balkema.
- Chappell, J. (2000). Pleistocene seedbeds of western Pacific maritime cultures and the importance of chronology. In S. O'Connor & P. Veth (Eds.) *East of Wallace's Line: Studies of past and present maritime societies in the Indo-Pacific region* (pp. 77–98). Modern Quaternary Research in Southeast Asia 16. Rotterdam: A.A. Balkema.
- Cole, N. (2000). The 'direct dating' of rock-pictures at Laura. In G.K. Ward & C. Tuniz (Eds.), *Advances in dating Australian rock-markings: Papers from the first Australian rock-picture dating workshop* (pp. 76–79). Occasional AURA Publication 10. Melbourne: Australian Rock Art Research Association.
- Cosgrove, R. (1989). Thirty thousand years of human colonization in Tasmania: New Pleistocene dates, *Science*, 243, 1706–1708.
- David, B. & Chant, D. (1995). Rock art and regionalisation in North Queensland prehistory. *Memoirs of the Queensland Museum*, 37(2). Brisbane: Queensland Museum.
- David, B. & Lourandos, H. (1997). 37,000 years and more in tropical Australia: Investigating long-term archaeological trends in Cape York Peninsula. *Proceedings of the Prehistoric Society*, 63, 1–23.
- David, B., McNiven, I., & Barker, B. (Eds.) (2006). *The social archaeology of Australian Indigenous societies*. Canberra: Aboriginal Studies Press.
- Davidson I. & Noble W. (1992). Why the first colonisation of the Australian region is the earliest evidence of modern human behaviour. *Archaeology in Oceania*, 27, 135–42.
- Diamond, J. (2001). Australia's last giants. *Nature*, 411, 755–757.
- Dortch, C.E. (1984). *Devil's Lair: A study in prehistory*. Perth: West Australian Museum.
- Dyer, C. (2005). *The French explorers and the Aboriginal Australians 1772–1839*. Brisbane: University of Queensland Press.
- Etheridge, R. (1891). Notes on 'rock shelters'... at DeeWhy Lagoon. *Records of the Australian Museum*, 1, 171–174.
- Field, J. & Fullagar, R. (2001). Archaeology and Australian megafauna. *Science*, 294, 7.
- Field, J., Fullagar, R., & Lord, G. (2001). A large area archaeological excavation at Cuddie Springs. *Antiquity*, 75, 696–702.
- Flannery, T. (2002). *The future eaters. An ecological history of the Australasian lands and people*. New York: Grove Press.
- Flood, J. (1976). Man and ecology in the highlands of southeastern Australia: A case study. In N. Peterson (Ed.), *Tribes and boundaries in Australia* (pp. 30–49). Canberra: Australian Institute of Aboriginal Studies.
- Flood, J. (1983). *Archaeology of the Dreamtime*. Sydney: Collins.

- Gillespie, R. (2002). Dating the first Australians. *Radiocarbon*, 44, 455–472.
- Gollan, K. (1980). Prehistoric dingo. (Doctoral dissertation, Australian National University, 1980).
- Gould, R.A. (1969). Puntutjarpa rockshelter: A reply to Messrs. Glover and Lampert. *Archaeology and Physical Anthropology in Oceania*, 4, 229–237.
- Harris, D.E. (1995). Early agriculture in New Guinea and the Torres Strait divide. *Antiquity*, 69(265), 848–854.
- Hiatt, L. (1987). Aboriginal political life. In R. Edwards (Ed.), *Traditional Aboriginal society* (pp. 174–188). Melbourne: McMillan.
- Hiscock, P. (1986). Raw material rationing as an explanation of assemblage differences: A case study of Lawn Hill, northwest Queensland. In G. Ward (Ed.), *Archaeology at ANZAAS Canberra* (pp. 178–190). Canberra: Department of Prehistory and Anthropology, Australian National University.
- Hiscock, P. (1990). How old are the artefacts in Malakunanja II? *Archaeology in Oceania*, 25, 122–124.
- Hiscock, P. (1994). Technological responses to risk in Holocene Australia. *Journal of World Prehistory*, 8(3), 267–292.
- Horton, D.R. (1981). Water and woodland: The peopling of Australia. *Australian Institute of Aboriginal Studies Newsletter*, 16, 21–27.
- Horton, D.R. (Ed.) (1994). *Encyclopedia of Aboriginal Australia*. Canberra: Aboriginal Studies Press.
- Johnson, C.N. & Prideaux, G.J. (2004). Extinctions of herbivorous mammals in the late Pleistocene of Australia in relation to their feeding ecology: No evidence of environmental change as cause of extinction. *Austral Ecology*, 29, 553–557.
- Jones, R. (1969). Fire-stick farming. *Australian Natural History*, 16, 224–228.
- Jones, R. (1975). The neolithic palaeolithic and the hunting gardeners: Man and land in the antipodes. *Quaternary Studies*, 13, 21–34.
- Jones, R. (1977). The Tasmanian paradox. In R.V.S. Wright (Ed.), *Stone tools as cultural markers* (pp. 189–204). Canberra: Australian Institute of Aboriginal Studies.
- Jones, R. (1978). Why did the Tasmanians stop eating fish? In R.A. Gould (Ed.), *Explorations in ethno-archaeology* (pp. 11–47). Albuquerque: School of American Research and University of New Mexico Press.
- Kiernan, K., Jones, R., & Ranson, D. (1983). New evidence from Fraser Cave for glacial age man in south-west Tasmania. *Nature*, 301, 28–32.
- Kirk, R.L. (1983). *Aboriginal man adapting: The human biology of Australian Aborigines*. Oxford: Oxford University Press.
- Lampert, R.J. (1980). Variation in Australian Pleistocene stone industries. *Journal de la Société des Océanistes*, 36(68), 190–206.
- Layton, R. (1992). *Australian rock art: A new synthesis*. Cambridge: Cambridge University Press.
- Lourandos, H. (1976). Archaeological field work in south-western Victoria 1974/1975. *Australian Archaeology*, 4, 9–10.
- Lourandos, H. (1983). Intensification. A late Pleistocene-Holocene archaeological sequence from southwestern Victoria. *Archaeology in Oceania*, 18, 81–94.
- Lourandos, H. (1996). *Continent of hunter-gatherers: New perspectives in Australian prehistory*. Cambridge: Cambridge University Press.
- McBryde, I. (1978). Wil-im-ee Moor-ring: Or, where do axes come from?: Stone axe distribution and exchange patterns in Victoria. *Mankind*, 11(3), 354–382.

- McDonald, J. (1992). Rock art in the Sydney region: Synchronic and functional variation in a dual-media, regional art body. In J. McDonald and I.P. Haskovec (Eds.) *State of the art: Regional rock art studies in Australia and Melanesia* (pp. 20–36). Melbourne: Australian Rock Art Research Association.
- McNiven, I.J. (1998). Enmity and amity: Reconsidering stone-headed club (*gabagaba*) procurement and trade in Torres Strait. *Oceania*, 69, 94–115.
- MacKnight, C. (1986). Macassans and the Aboriginal past, *Archaeology in Oceania*, 21, 69–75.
- Maynard, L. (1997). Classification and terminology in Australian rock art. In P.J. Ucko (Ed.), *Form in Indigenous art. Schematisation in the art of Aboriginal Australia and prehistoric Europe* (pp. 387–402). Canberra: Australian Institute of Aboriginal Studies.
- Miller, G.H., Fogel, M.L., Magee, J.W., Gagan, M.K., Clarke, S.J., & Johnson, B. (2005). Ecosystem collapse in Pleistocene Australia and a human role in megafaunal extinction, *Science*, 309, 287–290.
- Moore, D.R. (1979). *Islanders and Aborigines at Cape York*. Canberra: Australian Institute of Aboriginal Studies.
- Morse, K. (1993). Shell beads from Mandu Mandu Creek rockshelter, Cape Range Peninsula, Western Australia, dated before 30,000 b.p. *Antiquity*, 67, 877–883.
- Morwood, M. (2002). *Visions of the past: The archaeology of Australian Aboriginal rock art*. Sydney: Allen and Unwin.
- Morwood, M.J. & Hobbs, D.R. (Eds.) (1995). *Quinkan prehistory: The archaeology of Aboriginal art in S.E. Cape York peninsula, Australia*. Brisbane: Anthropology Museum, University of Queensland (Tempus 3).
- Morwood, M., Soejono, R.P., Roberts, R.G., Sutikna T., Turney, C.S.M., Westaway, K.E., Rink W.J., Zhao, J.-X., van den Bergh, G.D., Rokus Awe Due, Hobbs, D.R., Moore, M.W., Bird, M.I., & Fifield, L.K. (2004.) Archaeology and age of a new hominin from Flores in eastern Indonesia. *Nature*, 431, 1087–1091.
- Morwood, M.J., Brown, P., Jatmiko, Sutikna, T., Saptomo, E.W., Westaway K.E., Due, R.A., Roberts, R.G., Maeda, T., Wasisto, S., and Djubiantono, T. (2005). Further evidence for small-bodied hominins from the Late Pleistocene of Flores, Indonesia. *Nature*, 437, 1012–1017.
- Mulvaney, D.J. & Kamminga, J. (1999). *A prehistory of Australia*. Sydney: Allen and Unwin.
- Mulvaney, D.J. & White, J.P. (Eds.) (1987) *Australians to 1788*. Sydney: Fairfax, Syme & Weldon Assoc.
- Noble, W. & I. Davidson (1992). Why the first colonisation of the Australian region is the earliest evidence of modern human behaviour, *Archaeology in Oceania*, 27, 135–142.
- Noble, W. & I. Davidson (1996). *Human evolution, language and mind: A psychological and archaeological enquiry*. Cambridge: Cambridge University Press.
- Northern Land Council (2006). Land and sea rights. www.nlc.org.au/html/land_sea.html.
- O'Connor, S. (1999). Carpenter's Gap rockshelter 1: 40,000 years of Aboriginal occupation in the Napier Ranges, Kimberley, W.A. *Australian Archaeology*, 40, 58–59.
- O'Connor, S. (1995). *30,000 years of Aboriginal occupation, Kimberley, northwest Australia*. Canberra: Department of Archaeology and Natural History and Centre for Archaeological Research, Australian National University. (Terra Australis 14.)
- O'Connor, S. & Fankhauser, B. (2001). Art at 40,000 BP? One step closer: An ochre covered rock from Carpenter's Gap Shelter 1, Kimberley region, Western Australia. In A. Anderson, I. Lilley & S. O'Connor (Eds.) *Histories of old ages. Essays in honour of Rhys Jones* (pp. 287–300). Canberra: Pandanus Books.

- Pate, D.F. (2006). Hunter-gatherer social complexity at Roonka Flat, South Australia. In B. David, I. McNiven & B. Barker (Eds.), *The social archaeology of Australian Indigenous societies* (pp. 226–241). Canberra: Aboriginal Studies Press.
- Pawley, A., Attenborough, R., Golson, J. & Hide, R. (2006). *Papuan pasts: Cultural, linguistic and biological histories of Papuan-speaking peoples*. Canberra: Pacific Linguistics, Research School of Pacific and Asian Studies, The Australian National University.
- Porch, N. & Allen, J. (1995). Tasmania: archaeological and palaeo-ecological perspectives. *Antiquity*, 69(265), 714–732.
- Pretty, G.L. (1977). The cultural chronology of Roonka Flat. A preliminary consideration. In R.V.S. Wright (Ed.), *Stone tools as cultural markers* (pp. 288–331). Canberra: Australian Institute of Aboriginal Studies.
- Roberts, R.G., Jones, R., & Smith, M.A. (1990). Thermoluminescence dating of a 50,000 year-old human occupation site in northern Australia. *Nature*, 345, 153–156.
- Roberts, R.G., Flannery, T.F., Ayliffe, L.K., Yoshida, H., Olley, J.M., Prideaux, G.J., Laslett, G.M., Baynes, A., Smith, M.A., Jones, R., & Smith, B.L. (2001). New ages for the last Australian megafauna: Continent-wide extinction about 46,000 years ago. *Science*, 292, 1888–1892.
- Ross, A. (1981). Holocene environments and prehistoric site patterning in the Victorian mallee. *Archaeology in Oceania*, 16, 145–155.
- Satterthwait, L. & Arthur, B. (2005). Technology and material culture. In B. Arthur & F. Morphy (Eds.), *Macquarie atlas of Indigenous Australia. Culture and society through space and time* (pp. 48–64). Sydney: Macquarie Library Pty Ltd, Macquarie University.
- Smith, C. (1992). Colonising with style: Reviewing the nexus between rock art, territoriality and the colonisation and occupation of Sahul. *Australian Archaeology*, 34, 34–42.
- Smith, C. & Burke, H. (2003). In the spirit of the code. In L. J. Zimmerman, K. D. Vitelli & J. Hollowell-Zimmer (Eds.), *Ethical issues in archaeology* (pp. 177–200). Walnut Creek, CA: Alta Mira Press in cooperation with the Society for American Archaeology.
- Smith, M.A. (1986). The antiquity of seedgrinding in arid Australia. *Archaeology in Oceania*, 21, 29–39.
- Smith, M.A. (1989). The case for a resident human population in the central Australian Ranges during full glacial aridity. *Archaeology in Oceania*, 24, 93–105.
- Smith, M.A. (1993). Biogeography, human ecology and prehistory in the Sandridge deserts. *Australian Archaeology*, 37, 35–50.
- Smith, M.A. & Veth, P. (2004). Radiocarbon dates from baler shell in the Great Sandy Desert. *Australian Archaeology*, 58, 37–38.
- Smith, M.A., Bird, M.I., Turney, C.S.M., Fifield, L.K., Santos, G.M., Hausladen, P.A., & di Tada, M.L. (2001) New ABOX AMS ¹⁴C ages remove dating anomalies at Puritjarra rock shelter. *Australian Archaeology*, 53, 45–47.
- Thorne, A.G. (1976). *Origins of the Australians*. Canberra: Australian Institute of Aboriginal Studies.
- Thorne, A.G. (1989). The emergence of the Pacific peoples. In L.H. Schmitt, L. Freedman, & N.W. Bruce (Eds.), *The growing scope of human biology* (pp. 103–111). Perth: Australasian Society for Human Biology.
- Thorne, A.G. & Macumber, P.G. (1972). Discoveries of Late Pleistocene man at Kow Swamp. *Nature*, 238, 316–319.
- Veth, P. (1993). *Islands in the interior: The dynamics of prehistoric adaptations within the arid zone in Australia*. Ann Arbor, Michigan: International Monographs in Prehistory, Archaeological series 3.

- Veth, P., Smith, M.A. & Hiscock, P. (Eds.) (2005). *Desert peoples: Archaeological perspectives*. London: Blackwell Publishing.
- White, J.P. & O'Connell, J. (1982). *A prehistory of Australia, New Guinea and Sahul*. Sydney: Academic Press.
- Wright, R.V.S. (Ed.) (1971). *Archaeology of the Gallus site, Koonalda cave*. Canberra: Australian Institute of Aboriginal Studies.
- Wright, R.V.S. (Ed.) (1977). *Stone tools as cultural markers. Change, evolution and complexity*. Canberra: Australian Institute of Aboriginal Studies.
- Wroe, S., Field, J., Fullagar, R., & Jermin, L.S. (2004). Megafaunal extinction in the late Quaternary and the global overkill hypothesis. *Alcheringa*, 28, 291–331.
- Yen, D.E. (1995). The development of Sahul agriculture, with Australia as bystander. *Antiquity*, 69(265), 831–847.

Key Guides and Resources

Australian Archaeological Association:

http://www.australianarchaeologicalassociation.com.au/awards/rhys_jones.php. A list of all of Rhys Jones' publications. His work is by far the most engaging and accessible and covers many of the major debates in the field. In addition, the website hosts an index of the Table of Contents of every issue of *Australian Archaeology*.

Archaeology World: <http://arts.anu.edu.au/arcworld/resources/resource.htm>. This includes online resources for a range of material relating to Indigenous archaeology in Australia.

Mike Morwood's World Rock Art: <http://www.une.edu.au/Arch/ROCKART/MMRockArt.html>. This site has online coverage of some of the major issues in Australian rock art research.

Norman B. Tindale collection, curated by the SA Museum, contains the lifetime collection of Tindale's published and unpublished work, including papers, journals, maps, photographs, sound and film recordings, and notes, dating from 1920 until his death in 1993. Tindale was one of Australia's foremost anthropologists/archaeologists who worked with Aboriginal people in all parts of Australia and is best known for trying to map the complexity of Aboriginal language group boundaries across the continent (for more information, see Chapter 6). Some of the material in the archives is closed, but details can be obtained from the South Australian Museum: http://www.samuseum.sa.gov.au/archives/hdms/aa338/338_tindale.htm

Peter Brown's Australian and Asian Palaeoanthropology pages: <http://www-personal.une.edu.au/~pbrown3/ausindex.html>. This includes a range of research and teaching resources, including electronic versions of important articles on palaeoanthropology, as well as an illustrated summary of major specimens and sites.

3

Finding Funding

Finding funding for your project is important. Many projects cannot be undertaken without funds to cover fuel and travel costs, or to buy essential equipment. More importantly, funding also allows you to increase the quality of your work, in that it may allow you to pay specialists to undertake highly skilled technical tasks. Writing a funding application is also the best way of planning any research project, as it forces you to think deeply about how you will carry out the project, identify challenges or problems, plan a viable budget, and identify the concrete outcomes you hope to achieve. Scholars who take the time to develop a funding application will benefit from having more clearly defined goals, more detailed plans and overall better project management. This makes project outcomes more attainable. While granting agencies receive considerably more applications for support than there are funds available for distribution, you can increase your chances significantly through developing a thorough and professional application. Think of the time you spend on preparing a funding submission as a good investment.

The first step in the process is to locate an appropriate funding body. You do this through reading the job/funding description of your proposed funding agency to see if you fulfil their essential criteria. If you don't, then applying is just a waste of time. The essentials when applying for funding are having a project to sell (i.e. showing how good or novel the research proposal is), and being able to demonstrate a good track record and hence your ability to achieve a successful outcome. Whether or not you will obtain financial support for your project will be determined by two main factors. The first is the standard of your application. Whenever you apply for funding it is crucial that you submit the best possible application. For any funding body you will need to demonstrate what you are going to do, how you are going to do it, and why the project is important. The second factor is whether the funding body has a mandate to fund the type of project for which you are seeking support. Bear in mind that all funding programs have particular purposes. If the purpose of the program is to support Indigenous archaeology, for instance, it is probably pointless to apply for a maritime archaeology project unless there is some clear overlap (i.e. the Indigenous sites are underwater). The point to remember is that funding is always targeted at achieving specific outcomes. If you are going to apply for funding from a particular body, then you will need to show that your project

will help them to fulfil those outcomes. No matter how worthwhile the project or how well written the application, if the project falls outside of the organization's objectives, it will be eliminated in the first round.

The second step is to spread your funding applications as widely as possible. Don't confine yourself to one funding organization per project. Apply wherever your project fulfils the criteria, but let each funding body know of any other sources you have approached. Being able to demonstrate successful funding from one source is a great advertisement for your project and you can use this as leverage with other bodies. Think of how different aspects of your project could be funded in complementary ways by different funding bodies. If you are lucky enough to receive more than one successful grant you could even try to re-negotiate the terms of the funding. For example, "I have money from Foundation X for this aspect of the project, can I use the funding from Y for this complementary aspect?".

3.1. Types of Funding

There are numerous publications that will help you fine-hone your skills at finding funding, though most are aimed at an American market (e.g. Brown, 2001; Carlson, 2002; New & Quick, 1998; Quick, 2000). There are relatively few publications on how to seek funds in Australia (but see Funding Centre, 2001; Philanthropy Australia, 2005), and none on how to obtain support for archaeology or cultural heritage. In this chapter we apply some generally accepted fundraising principles to the particular situation of Australian archaeology. There are four main sources of funding for archaeological fieldwork in Australia: the government; industry; foundations; and fundraising activities. While there are many funding strategies that are common to all of these, there are also strategies that are specific to each.

3.1.1. *Government*

Both Australian state and federal governments have a range of funding programs that support archaeological research. Programs may be targeted to a geographical area, a specific theme, or may be more general. Your first task when assessing whether a program is likely to support your project is to see if there is a "match" between the program aims and the work you wish to do. The other thing to remember is to check current priority areas. These can change from year to year and it will strengthen your application if you are able to key into one or more. Finally, some government programs will ask you to justify your budget.

When you apply for government funding, you have to be particularly careful to show how your work relates to that of others in the field (particularly the people you suspect may be assessing your application). You will have to refer to the work of people who have done fieldwork in your project's geographic area, as well as to any previous research that has used a similar theoretical approach, similar methods, or dealt with a similar range of artifacts or sites. For example, if you are doing an

excavation in Burra, South Australia, you will need to refer to previous research in the region, as well as to demonstrate how the approach you take dovetails with that done by other researchers. Most importantly, you will need to show that your project is significant. This is usually done through demonstrating how your research fills a gap in existing knowledge.

The principal government funding body in Australia is the Australian Research Council* (ARC). The home page on its web site states:

The mission of the Australian Research Council is to advance Australia's research excellence to be globally competitive and deliver benefits to the community (www.arc.gov.au).

The ARC has several different grant programs, some of which exist purely to further knowledge, and others which aim to build international links or to further links between research and industry (see "Sources of Funding", below). The ARC is constantly updating its priority areas in response to wider government agendas, so make sure you check the current ones to see how your project will fit. Excellent research according to the ARC's description (based on the ARC Discovery Project Grants rules for funding commencing in 2006 available at http://www.arc.gov.au/apply_grants/discovery_projects.htm) is:

- Pure basic research which is experimental, and theoretical work undertaken to acquire new knowledge without looking for long-term benefits other than the advancement of knowledge.
- Strategic basic research which is experimental, and theoretical work undertaken to acquire new knowledge directed into specified broad areas that are expected to lead to useful discoveries. It provides the broad base of knowledge necessary to solve recognised practical problems.
- Applied research which is original work undertaken primarily to acquire new knowledge with a specific application in view. It is undertaken either to determine possible uses for the findings of basic research or to determine new ways of achieving some specific and predetermined objectives.

All of the ARC's awards can only be applied for through an Australian higher education institution. While the Chief Investigator has to be Australian, Partner Investigators can be non-Australian.

Apart from this, each state has limited government funding programs that support cultural and natural heritage. The Heritage Council of Western Australia*, for example, has a range of grants and incentives aimed at conservation of the built heritage of that state (www.heritage.wa.gov.au/d_programs_incentives.html). The Australian Heritage Directory (<http://www.heritage.gov.au/funding.html>) has links to heritage funding programs run by Australian state governments, as well as other sources of funding.

3.1.2. *Industry*

Getting funding support from industry also depends on the excellence of the research but requires slightly different skills. Some government programs—such as

the Discovery program of the Australian Research Council (see above)—simply exist to further knowledge. This is rarely the case with industry funding, however. Industry bodies have specific purposes that are usually related to making money for their company. Therefore, getting an industry partner to support your project will involve working out some way in which your research can help them to make money. This does not have to be a direct link—it might simply be through enhancing their profile or bonding with target groups, such as with the corporate sponsorship of conferences, or through providing the research that can be used in interpretive centres or cultural tourism. In short, industry sponsors do not fund projects for the warm and fuzzy feelings they will get out of it. If you are going to seek this form of support you will have to think about the potential benefits from the sponsor's point of view.

3.1.3. Government-Industry

In addition to more usual sources of funding, Australia also has a major program that partners government and industry funding. The Australian Research Council's Linkage Projects program is a major source of collaborative funding for archaeological projects. This program is designed to support collaborative research projects between higher education researchers and industry, and has a targeted allocation to projects that benefit regional and rural communities. Proposals must include a written pledge from an industry contributor, and the assessment process treats interaction with actual or potential users of research outcomes as a critical element. This program has the following objectives:

- To encourage and develop long-term strategic research alliances between higher education institutions and industry in order to apply advanced knowledge to problems, or to provide opportunities to obtain national economic or social benefits.
- To support collaborative research on issues of benefit to regional and rural communities.
- To enhance the scale and focus of research in Designated Priority Areas of Research.
- To foster opportunities for postdoctoral researchers to pursue internationally competitive research in collaboration with industry, targeting those who have demonstrated a clear commitment to high quality research.
- To provide industry-oriented research training to prepare high-caliber postgraduate research students.
- To produce a national pool of world-class researchers to meet the needs of Australian industry.

The most important thing about this program is that it has a much higher success rate than other government funding programs. In comparison to a success rate of around 22–25% for the ARC Discovery program, for example, the ARC-Linkage program has a success rate of around 45–48%. This has remained steady over the last ten years or so, despite an increase in the number of applications, as

the government has consistently channelled sufficient additional funding into this program to match increased need. The types of research that have been supported by ARC-Linkage funding include historic, Indigenous and maritime archaeology. As with Discovery awards, Linkage awards can only be applied for through an Australian higher education institution.

3.1.4. Foundations

Successful funding from foundations, trusts and other philanthropic bodies follows the same general rules. These bodies operate within legal constraints and are guided by the objectives, priorities and wishes of the donor. Like government programs, these bodies are established for specific purposes, and it is important to show how your project will help them to fulfil their aims. In contrast to government programs, however, an application to a philanthropic organization is likely to be assessed by a board of people who are not archaeologists. Most foundations and major funding organizations have a mission statement and submissions will be assessed in terms of how closely they conform to this. For example, the Wenner-Gren Foundation's* home page states that it is:

... a private operating foundation that supports basic research in all branches of anthropology. Created and endowed in 1941 as The Viking Fund, Inc. by Axel Wenner-Gren, the foundation's mission is to advance significant and innovative research about humanity's cultural and biological origins, development, and variation, and to foster the creation of an international community of research scholars in anthropology (<http://www.wennergren.org>).

If you are seeking part funding for a particular project, make this clear in your application and indicate your other sources of funding, both secured and potential. Remember that you can use other funding to leverage some success with foundation funding. In particular, if you have obtained funding from a government agency then this will demonstrate to corporate and other private funding sources your professional standing and scholarly abilities, providing them with an opportunity to use their contributions to support a project that has already been vetted by your peers. And of course if foundations only have to give you part-funding, some of their funds are freed up to support other projects. If you decide to seek foundation funding a good start is Philanthropy Australia's (2005) *The Australian Directory of Philanthropy*.

Shaking the Money Tree: Tips from a Turkish Kitchen

Since it's a truth universally acknowledged that no serious intellectual work can be done on a peevish stomach, we trudged happily through the aftermath of the deepest snow in New York City's recorded history to our favorite restaurant, the *Turkish Kitchen*, which, through the occasional visits of Claire Smith, has become heralded as the U.S. center for Australian archaeology. There, surrounded by stuffed grape leaves, hummus, sis kebab, shepherd salad, and

generous pourings of wine, we set ourselves to the task of offering tips for Getting Grants.

- In order to have as wide a choice as possible, in addition to consulting colleagues, scholarly association newsletters, and websites, you should make a practice of noting the acknowledgments in books and journals and jotting down funders' names. Check them for eligibility and fitness. A careful reading of the mission statement will help you to sort out the likeliest prospects for your project. Some require citizenship or have other guidelines that might exclude you; some focus on particular world areas; some focus on comparative studies and/or theoretical contributions (as we do at Wenner-Gren). If your proposal is outside the mission guidelines, you'd be shaking the wrong tree.
- When you've chosen the appropriate foundation(s) and received an application, the first thing to do is read the Directions. (Sorry, mate, you'd be surprised at how many people don't.) If it specifies font size, space limitations, number of copies, and physical arrangement of the proposal, don't sabotage yourself by ignoring these requests. You won't make it past the initial screening. And make a note of the deadline. If you miss it, you won't be invited to the dance.
- Keep the funder's mission in mind as you write. Make clear how your project will contribute to that mission.
- Try to summarize your research question(s) or hypothesis in one or two questions. Write the question on a card and keep it in front of you as you develop the proposal. This will remind you to stay focused on your central question, will help organize a literature review, and will prevent you from offering a boiler-plate methodology that isn't clearly connected to your research question. Define your key terms.
- Write in clear, straightforward English. Shun gratuitous jargon, convoluted phrasings, and trendy terms. Nothing irritates a reviewer more than puffed-up and unnecessarily obscure language. If what you're proposing to do isn't clear to the reviewers (trust us, they won't believe it's clear to you either), why would they want to give you money to do it? Remember, you have to make your case in the application. A personal interview, in which you can clarify or persuade, is not part of the process at many foundations.
- If the application asks for a review of the relevant literature, don't use the limited space as a chance to settle scores. Briefly summarize each pertinent study and describe how your project will add to, expand, correct, or otherwise modify the earlier work. Keep in mind that you're also offering a brief answer to the question of why this project needs to be done. (Fill-a-gap is not an adequate reason for some funders. Again, consult the mission statement.)
- PROOFREAD the application at least twice. It's unfortunate but true that a sloppy application—full of typos, misspellings, and grammatical errors—suggests to the reviewers that your scholarly work may be equally dodgy.
- When you're sure your application is as focused, clear, and polished as you can make it, and you've checked the directions again, put the completed application

in a sturdy envelope and entrust it lightheartedly to the post, or click Send and entrust it lightheadedly to the ether. Then take a deep breath, get a haircut, and hurry along to your own *Turkish Kitchen*.

Laurie Obbink, Conference Program Associate, Wenner-Gren Foundation

Pamela Smith, PhD, International Programs Administrator, Wenner-Gren Foundation

3.1.5. Fundraising

While grants are the usual way of funding archaeological research, at times it is possible to accomplish your goals more quickly and easily through fund-raising activities. This applies particularly to those situations where you need small amounts of funding quickly for a specific activity—one that has clear (and perhaps immediate) benefits. If you decide to engage in fundraising, you will need to establish some priorities. Instead of trying to raise funds for a range of activities, you should identify one or two achievable goals and focus your fundraising energies on them. It is a good idea to concentrate your endeavors on solutions, or on discrete aspects that will have tangible results. As with grant proposals, your fundraising efforts should inform donors of how their assistance will help to solve a particular need or problem, or how it will produce a particular product, such as an interpretive pamphlet.

One way of raising funds is to ask local businesses or corporations to donate goods and/or services that can be raffled or auctioned at a fund-raising event. This technique can be particularly effective in the pre-Christmas period. Another way of raising funds is to sell tickets to a fundraising dinner, with a prominent speaker (who hopefully donates their time). There is an opportunity here to use the money raised through fundraising to gain additional government or industry support: the fact that funds have been raised by the community indicates the need for the project and demonstrates that it has community support. Before engaging in a fundraising activity you need to be clear about what you hope to accomplish with the activity, identify your target audience, and make certain you have the resources necessary to produce the event. Some criteria to help you determine whether fundraising is a good idea for your particular situation include:

- What do you wish to achieve by holding a fundraising event? You should be able to identify a clear goal (“raising money” is not the right answer here).
- Do you have access to the necessary sponsors and potential attendees?
- Is it possible that the event will need underwriting? If so, and you are unable to obtain an underwriter, it is probably a good idea to give the whole thing a miss.
- Do you have enough people to run the event?
- Do the people who will help you organise this event know what is expected of them?
- Will the benefits that accrue from this event be worth the time, effort and money you will have to put into it?
- Is the budget realistic? There is no point in holding an event that costs more than it raises!

3.2. Funding Sources

The good news for researchers interested in travelling to Australia is that there are grant-making bodies in at least two countries from which funding can be sought: the home country and the host country. In addition, there are funding sources in some countries, such as Britain and the USA, which support research in other countries. While we discuss a number of overseas programs in the following section, our main aim is to illustrate the *kinds* of funding that are available, as any comprehensive treatment of sources is well beyond the scope of this book. Instead, we focus on the major programs in Australia that overseas people are eligible to apply for, as this information may not be well known outside Australia. Our examples are simply a starting point. There is a plethora of other programs in countries throughout the world, and we leave it up to individual researchers to identify appropriate programs in their own countries.

3.2.1. *Study, Research and Teaching*

Most countries have a range of grants available at universities that can be used for study, research and teaching. While some of these grants are aimed at particular countries or geographic regions, others are open. Often these schemes are not specific to archaeology, but simply part of general research funding programs run by national governments. Other schemes are specific to particular universities or institutions. Normally, these programs are open to applications according to the researcher's interest, both thematically and geographically. In the United States, the National Science Foundation (NSF) has an international fellowships program that funds postdoctoral fellows to go abroad to pursue research, which can include archaeology and archaeometry. Some counterparts to the NSF are the Humanities and Social Sciences Research Council (HSSRC) in Canada, the British Academy (BA) in the United Kingdom, and the Centre National de la Recherche Scientifique (CNRS) in France. In Sweden, the Swedish Foundation for International Cooperation in Research and Higher Education (STINT) offers a range of programs, including postdoctoral fellowships, while in the United States, the flagship international educational program sponsored by the United States government is the Fulbright Program. Designed to increase mutual understanding between people in the United States and other countries, the program has supported the educational exchange of around 275,000 people since its inception. In the words of its architect, J. William Fulbright:

The Fulbright Program aims to bring a little more knowledge, a little more reason, and a little more compassion into world affairs and thereby to increase the chance that nations will learn at last to live in peace and friendship (<http://exchanges.state.gov/education/fulbright/>).

The Fulbright Program provides grants for graduate students, scholars and professionals, as well as teachers and administrators from the U.S. and other countries.

Ines Domingo Sanz's Tips for Students from Spain: Getting Funding for Study or Research in Australia

Having international experience is important, as this will enhance your social experiences and academic development and also make you more employable. While there are a range of public and private programs in Spain that can give you the chance to study in Australia, they do not always cover all of your expenses. Normally, a good knowledge of English is required.

If you are a student enrolled in a formal program of study at higher education level leading to a degree or a diploma, you can apply to participate in an International Exchange Program for a period of between three and twelve months.

- With this program your studies abroad will be recognized at your home university and you won't have to pay university fees abroad (tuition, registration, examination, etc).
- You may also get a grant to cover your travel expenses, but probably not your living expenses or your health insurance.
- Each institution will have its own programs, so you will need to get information on all the exchanges your home university is involved in (i.e. which universities, faculties and countries). Check on the website of your home university about its partner institutions. For example, if you study at the University of Valencia, you can apply for a mobility grant to go to Flinders University (Adelaide, Australia) and you will get a grant of 1600 euros to cover your travel expenses.

There are other major pre-doctoral and postdoctoral fellowships for doing research in Australia. In both of these situations your academic curriculum plays an important role.

- If you have a degree, you can apply for a pre-doctoral fellowship in order to do your PhD. There are different public and private programs (State programs, local government fellowships, university fellowships, etc). The main ones are the Formación de Profesorado Universitario—Formation of University Teaching Staff (FPU) and the Formación de Personal Investigador—Formation of Researchers (FPI). The difference is that while the first fellowship is awarded by the state on the basis of the academic program, the second is awarded by the director of a project to whom the state has given a scholarship. Almost all of these fellowships include an annual grant to go to a foreign institution for between two and six months a year in order to improve your research, learn a new technique or check bibliographic material that is not available in your home university. These annual grants cover travel expenses and give you extra salary to cover the additional expenses of living abroad (including health insurance). To get these annual grants you have to write a proposal demonstrating that your project is viable and essential to your PhD research. You also need a letter of admission from the foreign institution in order to

demonstrate that you are not going to spend the money just travelling around (which you'll probably do as well when you are there).

- If you already have a PhD, you can apply for a postdoctoral fellowship to go to an Australian university or research institute for between 12 and 24 months. There are different public and private programs (state, local government and different banks and institutes). The public ones cover your travel expenses, give you a salary and some extra money to help with your arrival. They also cover your health insurance. To get a postdoctoral fellowship it is necessary to write a proposal to conduct original scientific research, to show the high scientific quality of the foreign institution and to get an admission letter from this institution.

Although the amount of funding you can get in Spain depends on the program, and sometimes it is very little, you should not lose the opportunity to spend some time studying or conducting research at an Australian institution. I recommend that you try to do this, and combine academic learning with enjoying the Australian way of life. Some relevant pages you should check are:

<http://wwwn.mec.es/univ/index.html>

<http://www.becasmae.es>

<http://www.uv.es/relint>

<http://www.gva.es>

<http://www.ucm.es/info/ucmp/pags.php?COOKIE.SET=1&tp=Programas%20Internacionales&a=internac&d=men00005.php>

Ines Domingo Sanz is a Postdoctoral Fellow at Flinders University, South Australia, supported by the program "beques postdoctoral d'Excel·lència" from the Conselleria d'Empresa, Universitat i Ciència de la Generalitat Valenciana.

There are several Australian-based research programs available to scholars from abroad. The main one is the Australian Research Council (ARC), which funds postgraduate and postdoctoral fellowships through a range of programs that include the Australian Postgraduate Awards Industry, Australian Postdoctoral Fellowships Industry, and Linkage Industry Fellowships. Another important program administered by the ARC is the Linkage-International Program. Remember that all of the ARC's grant programs must be applied for through an Australian institution. You do not have to be an Australian citizen to apply for these awards, but you will be expected to apply for residency should you be granted one. A number of other programs are associated with particular relationships between the Australian government and other governments. Australia has a particular interest in establishing mutual understanding within the regions of East/Southeast Asia and this is reflected in a number of regional alliances with associated research programs. The organizations that manage these programs include the Australia–China Council*, the Australia–India Council*, the Australia–Japan Foundation*, the Australia–Korea Foundation*, the Australia–Malaysia Institute*, the Australia–Indonesia Institute* and the Australia–Thailand Institute*. People from these countries who

seek funding to conduct archaeological research in Australia are advised to contact these organizations directly (they will have offices in both countries), as well as through their local Australian Embassy.

The situation for students varies according to whether you wish to study at an undergraduate or postgraduate level. A comprehensive source of information on more than 1,000 Australian institutions, including universities, vocational education and training institutes, English language colleges and schools, is IDP Education Australia Limited* (IDP), which is an independent not-for-profit organization jointly owned by Australian universities (<http://www.idp.edu.au>). While there are a number of programs to which postgraduate students can apply, few are available at the undergraduate level. Most international scholarships are at the postgraduate level and areas of research such as medicine or engineering have the support of a wider range of funding sources than archaeology, which is normally positioned in the humanities and social sciences. The Australian government's AusAID program funds Australian Development Scholarships (ADS) and Australian Partnership Scholarships (APS) for postgraduate study at any Australian university. The award of these scholarships includes up to 12 months pre-departure training, a return airfare to Australia, all tuition and academic fees, and an annual stipend for living expenses and basic health insurance cover in Australia. However, to win one you would have to put a development "spin" on the application (see <http://www.ausaid.gov.au>).

Some programs are specific to the sub-discipline. For example, students who wish to conduct research in maritime archaeology can seek small amounts of funding from the Professional Association of Diving Instructors* (PADI), through its AWARE program, which has a project office in Australia (<http://www.projectaware.org>), or through the Commonwealth Historic Shipwrecks Program, administered by the Department for the Environment and Heritage*. Those seeking support for projects with Indigenous Australians can apply to the Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS), which supports research in a wide range of areas, such as history (including family and community history), politics, law, public policy, health (social, cultural and environmental aspects), biological sciences, education, linguistics, social anthropology, archaeology and the arts (see www.aiatsis.gov.au). Other programs are responses to specific, and transient, circumstances. For example, the Tsunami Response Scholarships were recently established for students affected by the December 2004 tsunami in Indonesia and Sri Lanka as part of IDP Education Australia's Peace Scholarship Program. The most comprehensive database of scholarships in Australia is the Joint Academic Scholarship Online Network (JASON). This database (www.jason.edu.au) includes scholarships that support international students wishing to study in Australia.

Bradley L. Garrett's Tips for Graduate Students from the U.S.A.

- First and foremost, federal student aid loans (Stafford, Perkins, etc.) are not going to cover your program expenses. While they may be enough to cover tuition and books, they may not cover room and board. To make matters

even tougher, many schools cap the amount they allow you to take. In my case, although I qualified for \$30,000 USD a year in loans, my university would only let me take out \$18,500 USD. Your best bet, unless your parents will support your higher education, is to save at least \$5,000 USD before you leave. Otherwise, you will be stuck taking out private loans with terrible interest rates to pay for things like groceries. You don't want to be in that situation.

- Don't be misled by the exchange rate! International tuition in Australia is comparable to North America. Also, don't forget to take other costs into account. Although it may initially appear less expensive to pursue graduate studies in Oz, transportation can add up very quickly, and setting up house even more. Even shipping your belongings over will cost you a small fortune unless you send it by sea which can take three months! If you can, live on campus and take public transportation. It might seem appealing to buy a car or sign a lease on off-campus housing, but when it is time to leave, it can be a headache to cut all of those ties.
- Don't expect to depend on grants, scholarships, or teaching assistantships to fund your Australian education. The fact is, most scholarships offered to students from the United States will not transfer to an international institution. You also will not find many teaching assistantships. There are few positions, and they tend to be filled quickly by Australian students (who ironically pay about 1/10 the tuition you will).
- Many things might complicate you getting paid work in Oz. Without a work visa you will be prohibited from working, and universities in Oz expect a lot from their graduate students. You will more than likely be invited to assist with research outside of your normal workload and it would be foolish to pass up opportunities like these just to have a little extra cash.
- Although you should not depend on them, look for other sources of funding in Australia. Many agencies, such as the PADI Project A.W.A.R.E. for maritime-related research, don't ask whether you're an international student. There are very few scholarships aimed at students looking to study abroad, but if you have the energy, motivation, grades, references, and luck to get through the application process, a Fulbright scholarship would cover it all.
- The last tip, and the most important, is that the degree is worth every penny. Although you may fork over quite a bit more than you would have staying in the United States, you will have had the experience of living in Australia, living around different cultures, and being part of a much smaller (and at times much friendlier and more open) archaeological community.

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There are a number of Australian-based organizations that support visiting professorships or lectureships. The Japan Foundation*, Sydney, has a Visiting Professorship Program for Japanese Studies that provides support for invited scholars from abroad to deliver courses on subjects related to Japan in the fields of humanities and social sciences (www.jpff.org.au). The Australian Fulbright Program has a U.S. Senior Specialist Award, which supports Australian educational institutions who wish to bring U.S. Senior Specialists (in any discipline) to Australia for a two to six week period (www.fulbright.com.au). The Department of Foreign Affairs and Trade* has a Cultural Awards Scheme that supports an Australian lecture tour by high-ranking scholars and cultural administrations (www.dfat.gov.au). The Humanities Research Centre* at the Australian National University has a limited number of fellowships open to international scholars of high standing and demonstrated achievement who wish to work and pursue their studies at the Centre (www.anu.edu.au/hrc/grants/index.php), while the Australian Academy of Humanities* supports scholarly exchanges with sister institutions in the Netherlands and Sweden, and scholars from the former USSR and Indonesia/South-East Asia, as well as joint projects between British and Australian scholars (www.humanities.org.au/Grants/International/International.htm).

3.2.2. *Travel Grants and Conference Funding*

While there are some travel grants available to bring researchers to Australia, the best sources for travel grants will be in your own country of origin. In the United Kingdom, the Prehistoric Society, the Quaternary Research Association, the Leverhulme Trust, the Royal Society, the Royal Economic Society and the British Academy all offer travel and research grants. You have to be a member of the first two associations to be eligible to apply, however, and the amounts they offer are relatively small. The Royal Society and the Royal Economic Society are able to offer more substantial sums, while the British Academy offer up to £800 at the time of writing, but funding from this source is particularly competitive. Another highly competitive but substantive source is the Leverhulme Trust. While the number of travel awards available to students is limited in all countries, an important award in the United Kingdom is The John and Bryony Coles Bursary (Student Travel Award), which supports recipients travelling abroad to gain a better understanding of prehistoric archaeology, whether by taking part in excavations, surveys or other fieldwork, by working in museums, or by travelling to visit sites. Details of this award are available at <http://www.ucl.ac.uk/prehistoric> (under Grants & Awards). Other useful funding sources in the United Kingdom are available at www.gla.ac.uk/archaeology/research/pgfunding.html.

A number of Australian-based funding organizations have schemes to support travel and conference funding. The Ian Potter Foundation* has a Conference Grants Program that supports the travel costs for a Keynote Speaker at an international conference in Australia. The application has to be made by an Australian institution or organization and applicants have to supply proof of confirmed financial support

from that institution of at least the sum being requested from the foundation. However, the foundation does not provide travel grants for undergraduate or post-graduate students, or retrospective grants for travel that has already been undertaken (see www.ianpotter.org.au). The Japan Foundation, Sydney, has two similar programs that provide limited conference support. The Grant Program for Research and Conference for Japanese Studies funds academic or research institutions conducting joint-research, conferences, seminars, workshops and intensive course projects that are related wholly or in substantial part to Japan, while the Grant Program for Intellectual Exchange Conference provides grants to partially fund collaborative intellectual projects such as international conferences, seminars, workshops and training that address common problems and foster understanding in Asia and Oceania.

3.3. Preparing a Submission

It is most important that you always check with funding bodies about what their specific requirements are *before* submitting your project proposal. While grant applications should be tailored to individual funders, there are basic principles that apply to all submissions. A well-prepared submission is properly researched, written in a clear and succinct style, structured logically, and is clear about what the applicant hopes to achieve and what they are requesting from the funding body.

3.3.1. *Research and Writing*

Proposals to funding agencies come in all shapes and formats. Some organizations will ask for a short letter on inquiry, so they can decide if they want to take the time to assess a full proposal, others will have application forms and a few will have no formal guidelines at all. In some cases, you will be required to attend an interview. Research is the key to successfully raising funds. You need to research your project thoroughly and you need to research your potential funders as well. Appendix 3 and the websites at the end of this chapter include information on a number of potential sources of funding for archaeological projects. Before preparing an application, your research on potential funders should include the following:

- Read the current guidelines.
- Determine if the funding body funds your field of research.
- Check the eligibility criteria.
- Ensure you fit all eligibility criteria.
- Determine if your project fits within the priorities of the funding scheme.
- Determine if the funding body has an interest in your geographic region.
- Identify key contact person(s).
- Identify submission deadlines.

- Determine the time it takes to have a grant approved.
- Determine the release date for funds, if the grant is approved.

After you have finished your research you will have identified the organizations that are likely to fund your project, and will know their application guidelines. Now, all you have to do is write the application. Perhaps the most important point about writing submissions is that you submit the best possible application. You should expect to write several drafts and you will need to start writing well in advance of the submission date. In your application, you will need to show:

- What you are going to do.
- How you are going to do it.
- Why the research is important.

You will need to tell a story about the gap or need that your research or project is addressing and how your work will fill this gap, or make a difference. As part of this you need to show:

- How the research is innovative.
- That you have positioned your project properly within your field.
- That your methods and time-frame are realistic.
- That you have the qualifications, knowledge and experience to carry out the project successfully.

Tips for Preparing Your Submission

- Keep the assessment criteria in front of you as you write your submission. Make certain that you address all the criteria in your description of the project. Don't forget that your reviewers will evaluate your submission against these criteria.
- Make certain your application is well presented. Proofread it thoroughly. Typographical errors or sloppiness in presentation will suggest that the research project will be carried out to a similar standard.
- Write as simply as possible, avoiding too much technical jargon and providing simple definitions of specialised terms. A well-written application will be intelligible to a lay reader. Get your friends or mother to comment on your submission, and use this as a basis for fine-honing your writing.
- Make certain that you keep to the guidelines and word or page limit. Do not try and circumvent these rules. It is foolish knowingly to irritate your assessors.
- Show how your project and research strengths are best served by conducting the work from the base you have chosen. This is especially important for applications for fellowships, where you will have to demonstrate that you have chosen a host institution that provides the most productive research environment.

- If appropriate, show that you will be seeking supporting funds for other aspects of the project.
- Choose your referees carefully. There are five important criteria here:
 - They can comment knowledgeably on the project.
 - They can comment knowledgeably on your capacity to achieve a successful outcome.
 - They will give you a decent reference.
 - Their opinions will carry weight.
 - They will produce the reference.
- Remember that well-chosen attachments (e.g. a résumé or copies of published papers) can enhance your project description.

Victoria Alvarado's Tips for Getting the Best out of Your Referees

- Always ask your referees *before* you nominate them to referee for you.
- Make sure to give your referees ample time to complete the recommendation. Do not wait until the last minute to request the reference.
- Let your referees know about any specific instructions required of them to complete the reference form—i.e. whether there is a specific recommendation form, or explicit topics they need to include, or simply that they need to place their signature on the back flap of the envelope before mailing it out.
- It is always helpful to remind your referees of any classes you may have taken with them, and the grades you received. You could even send papers you wrote for them, to remind them of the standard of your work.
- Providing a copy of your CV, university transcript or any other pertinent material will help your referees write a more solid and complete reference. The wider the range of information you give them, the easier it is for them to write a good reference.
- Supply specific information regarding the position you are applying for and for which they are writing the reference, e.g. the application form or the program website so that they can tailor your reference to that position.
- Most importantly, periodically send them an email, leave a phone message or send a note reminding them of the upcoming due date. Your referees are probably swamped with millions of other tasks, and your reference could easily slip their mind.

Victoria Alvarado is currently working on a master's degree in archaeology at Columbia University in New York.

For further information on writing a proposal, we recommend the Proposal Writing Short Course, which is available at no cost on the web site of the Foundation Center (<http://fdncenter.org/learn/shortcourse/prop1.html>).

Some funding programs may call upon you to attend an interview. If this happens, be glad, as this means you have got through a first, and possibly even a second, cull. You should look forward to your interview, rather than dread it. This is an opportunity for you to share your excitement about your project with your potential funders. It also provides a chance for your funders to clarify possible problem areas in your application (and this has to be a good thing) and to assess how your personal qualities will facilitate the successful completion of your project. The interview is particularly important in programs such as the Fulbright program—where you are expected to be an ambassador for your country—and for some particularly large grants from the government. Either way, the interview provides a great opportunity for you to move closer to obtaining the funding you are seeking.

Mark Darby's Tips on Applying for, or Being Interviewed for, a Grant

- Do your homework on the focus and history of the specific grant for which you are applying and ensure your application addresses these points.
- Do not cut and paste your latest research proposal in jargon, write it in plain English and ensure it communicates to a wider audience (get a PR person to proof read it for you).
- Define what is unique about yourself and your project proposal, as opposed to any other applicant.
- Prepare thoroughly for any interview and think about what you want to “bring to life” from your written application. You should leave the panel with a greater clarity of your proposal and who you are as a person, along with your clear enthusiasm and commitment.
- Believe in yourself.

Mark Darby is Executive Director of the Australian-American Fulbright Commission (www.fulbright.com.au).

Even though it is important, there is no need for an interview to be a harrowing experience. Basically, the interview is nothing more than a conversation that has a specific focus. It can be helpful to think of the interview from the point of view of the interviewers. They have a particular task, which is to find out if you meet certain criteria, and to assess if you are a reliable person, likely to produce the outcomes you promise. Their criteria will relate to the organization's mission and to the program's assessment criteria, both of which should be public information. Since questions will be slanted to this perspective, you can help the interviewers if you shape your answers so that they clearly “hit” the criteria. The best way to do this is to make sure you are thoroughly versed in the organization's goals, the program criteria and, of course, your own research project. If you are well prepared, the interview conversation should be focused, productive and pleasant, allowing you to keep cool-headed and responsive even when the stakes are high.

The University of Dundee's Top Tips for Interviews

- Be polite and friendly to everyone you meet from the moment you arrive until you leave.
- First impressions are crucial—smile as you greet people, look like you're pleased to be there and reasonably relaxed, even if you're not. Give a firm handshake if one is offered (but don't break any bones). Sit when offered a chair.
- Speak up, talk clearly and at a moderate pace.
- Be aware of body language—avoid crossed arms or legs; don't slouch or lean back too far. Lean forward to show you're attending to them but don't invade their personal space.
- It's OK to use hand gestures but in moderation. A rule of thumb is keep them above your waist and below your shoulders.
- Give the interviewer good eye contact but don't eyeball them. If there is more than one of them, speak mainly to the person who asked the question but don't ignore the others.
- Be friendly and open but don't try and ingratiate yourself or be too smarmy or over-familiar with the interviewer.
- Build rapport so the interviewer enjoys interviewing you.
- Be yourself rather than putting on an act, but emphasise the positive aspects of your personality. If you are slightly shy or downbeat try and inject energy and enthusiasm into your performance.
- Make sure you understand what the interviewer is asking. If you are not sure ask them for clarification. Avoid simply guessing.
- Make sure you answer the question asked and all parts of it.
- Don't get too technical or jargonistic unless your interviewer is from the same technical background.
- Give detailed answers which give examples demonstrating possession of the requisite skills but avoid waffling. Try and give evidence that you not only did something but also did it well, e.g. the mark you got, or if you were promoted.
- Always tailor and relate your answers to the job description/person specification and reflect the skills and language used in them.
- Keep your answers positive and try not to badmouth people or organizations. Always focus on the relevant benefits.
- If you cannot think of an immediate answer ask if you can come back to it.
- Avoid conflict or getting into an argument but let them know if you feel a question contravenes equal opportunities policy.
- Make sure you know what your key relevant skills and experiences are and make sure you communicate them. You can control the interview to some extent by the leads you give, e.g. "in addition I did a project on 'X', if you would like to hear about that".
- Follow their visual cues. If they appear interested be more expansive. If they look impatient or bored it might be time to stop. If you are not sure whether

you have gone into enough detail you could ask them if they'd like you to elaborate.

- It's usually OK to bring material in with you, such as your CV or a list of questions, but ask first and don't constantly refer to it.
- Don't put yourself down or volunteer any weaknesses unnecessarily.
- Don't brag or be too arrogant but don't hide your light under a bushel. Prove you can do the job by the evidence you give them.
- Even if you're a brilliant liar be careful. If you get caught out they will wonder if you're trustworthy or if they can believe anything you say. You won't do yourself any favors if you claim you can do something but get found out once you have been appointed. Honesty is the best policy.
- Be careful with humor—what you find funny your interviewer may not.

From: <http://www.dundee.ac.uk/careers/resources/advice/toptipsforinterviews.htm>.

3.3.2. *The Components of a Submission*

What are the components of a good proposal? While the specifics will vary according to the requirements of particular grant-making bodies, a professional proposal will include some or all of the following:

Cover letter. This is the first document the funder will read and it is often the basis for either consideration or rejection. The cover letter should outline, simply and clearly, the type of support you are requesting, the goals of your project and how they fit with the funder's guidelines, the total budget you are asking for and the names of any other funding contributions you have already acquired for the project.

Cover page. Project title, the name, affiliations and contact details of the applicant(s).

Abstract. A brief summary of the project, written so that it is clear, concise, and intelligible to an intelligent lay person. It is a good idea to write this last, when the project is clearly formulated. This is a very important part of the proposal: even if the reviewer skims the overall project (and they are likely to), they will always read the abstract.

Aims and background. What problem is the project addressing for the discipline as a whole? How does your work fit in with that of other archaeologists, both nationally and internationally? Move from the general and narrow down to your specific project. Write the literature review to highlight the significance of your project. In a sense, you are establishing the gap that your project will fill. Avoid jargon and hyperbole, such as claiming your project will be "best practice".

Significance and innovation. What is the gap you are addressing? What is unique or important about your proposal? Does the research address an important problem? How does your project fit in with the state of knowledge in the field?

How will things be different when your work is done? Will the issue be solved or the situation improved? Use this section to highlight any new methods or technologies that will be used in the research.

Methods. How will you accomplish your objectives? Give a detailed description of your research plan, data collection, analytical methods and specialist techniques and timeline. It is essential to demonstrate that your methods are adequately developed and suited to achieving the aims of the project. The timeline needs to be detailed and realistic.

Budget summary. This states the duration of the project and total cost, as well as any income already secured.

Budget. Be detailed and realistic. You will also need to write a paragraph or two justifying the budget, explaining why you need a four wheel drive to visit your site (e.g. it is off a sealed road), or why you have to pay a research assistant at a particular rate (the answer here is the level of expertise needed to accomplish the task). Don't forget to check with your funders for any special requirements.

Potential difficulties. Are there problems or barriers that you can foresee? How will you overcome them? Highlighting these challenges, and showing how you will deal with them, is one way of demonstrating that your study is informed and professional. Don't dwell on them, though!

Relevance of applicant skills, training and experience. Why are you the right person to undertake this project? This is the section where you can highlight your key accomplishments and qualifications, as well as those of volunteers and others involved in the project. Also, this is an opportunity to augment your professional qualifications with your personal experiences and skills. For example, if you are applying for funding for a maritime project at a place where you have long been a recreational diver, this is the place to mention this. If it is a community project, highlight your relationships to the community.

Roles of participants. Be specific about what you and other participants will be doing in terms of each individual, e.g. "Smith will be having a holiday in Puerto Rico, while Burke will be in Adelaide doing all the work".

Outcomes. Where possible, these should be stated in measurable terms (such as papers for publication, conference presentations, posters, pamphlets, interpretative materials, management recommendations). Sometimes these can be divided into two categories: (1) scholarly, academic products in the form of journal articles, and conference presentations; and (2) community-based products that respond to local needs. Don't forget to include the economic and/or social benefits that may accrue from the research.

Evaluation. What quantifiable methods will you use to monitor the success of your program? How will you know if your project has achieved its aims? In this section, you need to provide an outline of the methods you will use to evaluate your project, identify who will conduct the evaluation and when they will do this, and outline how the reporting will be done. For large and especially complex projects, an advisory committee can be set up from the beginning to monitor and guide the project's development.

Communication of results. How you will get your results known by those who should know about them (e.g. other researchers, the local community, the nation)? This should be closely linked to your outcomes, as these are, in part, the mechanisms by which you will convey the project's achievements.

Attachments. The right attachments can provide depth to your project beyond that allowed by page or word limits.

This outline is not exclusive—it is simply a guide to preparing a professional proposal. The actual components you use for each proposal will vary according to the granting organization. Some will want all of this information, others will not. Your ability to fine-hone a basic proposal to the aims and needs of individual grant-makers is one of the factors that will determine your funding success.

3.4. How Applications are Assessed

Given that there are different types of funding bodies, it follows that there will also be some variation in how applications are assessed. When you apply for government funding, an expert panel will assess your application. Depending on the funding body, this panel is likely to include an archaeologist. The assessment procedure normally involves the following steps:

- The panel meets to consider each application's eligibility and to remove those applications that are clearly ineligible.
- The panel assigns a number of assessors to all remaining applications.
- Each application is assessed in terms of quality of project and quality of investigator(s).
- From this assessment the panel devises a final ranked list.
- Uncompetitive applications are excluded from further consideration.
- The panel reviews the budget for each remaining application and recommends a budget for each.

An application to an industry sponsor, on the other hand, is likely to be assessed by at least one intelligent layperson. The job of the industry sponsor is to achieve specific outcomes, usually to do with heightening their profile, and generating economic benefits, and they will assess your application in terms of whether, or how much, it furthers these goals. The main question the industry sponsor will ask is "What am I going to get out of this?" If you bear this in mind, then you can develop your proposal so that you are able to meet both their needs and yours. For example, a local council might need archaeological sites identified in order to develop some cultural tourism programs. At the time you first approach them they may be thinking of cultural tourism as food, wine and the arts. Your task becomes getting them to extend their thinking to recognise heritage as part of cultural tourism, and to identify some specific ways in which your fieldwork will help them. This could simply be by providing information for interpretive

pamphlets or signs. Remember, you will have to draw the link for them—do not expect them to see this by themselves. As with industry sponsorship, an application to a foundation or trust is unlikely to be assessed by specialists in your field. This means that you will need to be especially clear in your explanation of the project and its significance, as you are writing to a lay audience. Also, not all foundations have specific guidelines and/or application forms. This means that you may have to structure the submission yourself (see “The Components of a Submission” above).

Ken Wilson’s Tips on Applying to Foundations

- Give yourself fund raising lead time, because funders have deadlines and bureaucratic processes to deal with—a year is ideal, six months is really the minimum start time.
- Firm up your relationships and agreements with local institutions and other stakeholders before approaching donors, not only because it’s right, but because many will check to verify these.
- Write a standard core proposal and budget as a template, and then “spin” it to the guidelines, ideologies and predilections of the different funding bodies once you have studied them through their websites and through reviewing the list of projects they’ve previously funded. (And sought counsel from anyone who has ever received support from them before.)
- Remember: sometimes it’s easier to think of a cheaper way of doing something than to raise extra money.
- Be enthusiastic, get noticed, listen to what’s behind a funder’s quizzing, push gently to the last, *do* take “no” for an answer if it comes to that and take your energy and learning to a new funding prospect.
- Help potential funders to understand the significance of your work without being grandiose or patronizing. Most donors want public engagement as well as individual discovery. Think about how your project might achieve this and make reasonable claims about that in your proposal.
- Keep your funders posted on progress (and not just success), and submit reports on time even if the project is delayed, if for no other reason than that you’ll doubtless want another grant at some point!

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One important thing to remember in terms of how your grant applications will be assessed is your track record. Aim to establish a reputation for producing results and take great care with all reports that you submit. Interim reports are often an institution’s principal method for evaluating exactly how your work is progressing. It is up to you to satisfy the funding body that their money is being spent correctly. Take even greater care with final reports, because these will demonstrate that you have completed the project as planned and fulfilled all of your responsibilities.

You need to be especially vigilant when submitting reports to foundations and industry sponsors. Often, the reports will be presented to the same people who assess applications, giving you a good opportunity to show the high quality of your work. This helps you to establish a track record for excellence—and will strengthen future applications to that organization.

A Checklist for Funding Applications

Have you demonstrated:

- The inherent value of the project?
- How the project will further the aims of the funding body?
- The extent of community support (especially that of Indigenous people who may be involved) for the project?
- Your ability to carry out the aims and objectives of the project?
- Your previous track record? If you are applying for funding for the first time it may be best to start out by applying for reasonably small amounts. You have not yet established your ability and dependability. Every funding body has a responsibility to fund projects that will be completed, and until you have established that you can be relied upon you cannot expect to be granted substantial funding.
- The tangible outcomes of the project (e.g. a report, a video, photos, tapes, the physical protection of sites, a thank you letter in the newspaper)?

Does your application:

- Fulfil each of the eligibility criteria?
- Have methods that are consistent with achieving the aims of the study?
- Have a budget that is sufficient to produce the promised outcomes, but not inflated?
- Have a structure that is logical and well organised?
- Have a timeframe that is realistic and “do-able”?

3.5. Budget Business

While the budget is a vitally important part of any submission, applicants often treat it cursorily. This is a serious mistake. A budget indicates how well a project is planned and a poorly planned budget can prompt general concerns about the viability of an application. Getting the budget for your project right is one of the hardest parts of any funding application. A well-planned budget will speak to your professional skills and standards, and will give your proposal a competitive edge. Furthermore, a well-managed budget will become part of your track record and will increase your ability to obtain return funding from that agency.

3.5.1. *Planning Your Budget*

Your budget needs to be tied to the narrative you write to describe the project. When you have written the narrative, read it with an eye to the budget and make a note of anything that represents a project expense. You can then factor this into your budget. This will make sure that the budget you prepare is thorough, and does not overlook essential costs. In essence, your budget should act as a “snapshot” of your research. An elegantly planned budget will tell a story that parallels that of the narrative. It will almost stand alone, providing the assessor with a basic understanding of the project even before they read the project description.

The most important thing is to make sure that your budget is realistic—there is no point in getting only a small amount of funding for what is really a very large job. One of the worst outcomes for any project is when there is enough money to undertake the fieldwork, but not enough to analyse or write up the results—this is bad ethical practice that could have been avoided from the beginning through sensible planning. Don’t ask for more than you need, and don’t ask for less than you need. It is important that your budget contains only the essential and minimum costs to conduct the research and produce publications in a timely way. Make certain also that the amount you request is within the normal range of grants offered by the granting body: there is no point in applying for \$50,000 if the average amount granted is \$5,000. You should pay careful attention to budget itemization. This should provide details that may not be clear in the project description, such as how much you will be paying project consultants or how far you estimate driving each week. It also demonstrates that none of the things you are asking for are frivolous, but are in fact closely tied to the successful completion of your research. A well-planned, detailed budget will include:

- Anticipated income.
- Total costs.
- Any in-kind and financial support that will be provided by the applicant.
- Any in-kind support that will be provided by sponsors.
- Any other funding bodies from which complementary funding is sought.

Budget Checklist

- Proofread your budget. Does it add up?
- Is the budget fair? Funding exists to help you break even, not make a profit.
- Is the amount you ask for at the beginning the same total as in the body of the application?
- Is the budget realistic? It should be neither greedy nor penny-pinching. Assessors easily spot an inflated budget, and an under-estimated budget raises questions about your ability to understand the requirements of the project and to do it in an efficient and timely manner.
- Is the budget balanced? Does it show that the total expenses equal the anticipated income?

- Are you asking for support within the range normally granted by the funding agency? Is the budget within the minimum and maximum amounts determined for this program? If it is outside these parameters, your application may be open to exclusion on technical grounds.
- Does the budget allow for preliminary research, fieldwork, analysis and writing up time (as a guide you can usually allow for three days in the lab or office for every one day you spend in the field) and, if necessary, conservation of the artifacts in the long term?
- Have you budgeted for fees for Indigenous consultants (both for their time in providing you with information and their labor if they have acted as fieldwork assistants)?
- Have you budgeted for any other necessary specialists' fees (for example, surveyors, conservators, or historians)?
- If you are in the lucky position of being able to employ someone to do part of the work, have you budgeted for the costs of advertising the position and interviewing the applicants?
- If you have support already, have you included this, and the places it has come from?
- If you are providing support in kind, have you included this in the budget, as a contribution to the project? Even if you give it, your time is not free!
- Have you checked to see if the organization has an established schedule of rates for specific budget items? If it does, has your budget used these rates?
- If you have support from volunteers, donations and in kind services from others, have you included this in your budget? This is an opportunity to reinforce the level of community participation in, and support for, your project.
- Is each item in the budget adequately justified?
- If you are not sure where to show a particular expense in the budget, call your potential funder and ask the project officer.

3.5.2. *Justifying Your Budget*

The normal assessment process is for the panel to decide which projects it would like to fund and then to look closely at the budgets to see if they can be cut back. This is why you need to justify each item in your budget, not only in terms of why you need it, but also in regards to the amount you seek for it. It is not sufficient to state that a full-time research assistant is required, without highlighting the skills and responsibilities such a person would bring to the project. You also need to state clearly the rate at which the research assistant will be paid, and use the job skills required to explain why you have selected that rate. When preparing a budget try not to guess the cost of specific items, such as an airfare. Get your travel agent or the airline company to provide exact figures for the period in question. Remember, any item that is not justified properly will be the first to be cut if the panel decides to trim your budget.

3.5.3. *Revising Your Budget*

Part of the assessment process is for the panel to determine whether project budgets are suitable. This means that a grant may be funded, but not at the level the applicant has requested. Some reasons for this are:

- The funding is limited (of course) and the funding body has decided to grant lower amounts than requested in order to support more projects.
- While the overall application is fine, one of the budget lines falls outside the program criteria. For example, some programs will not fund teaching relief or the salary of a researcher who is a university staff member.
- The assessors have decided that not all aspects of the budget are fully justified.

There are two real possibilities that you may have to contend with. The first is that you are granted an amount lower than you requested and you now have to work out how to manage these funds to achieve your principal objectives (see “Managing Your Grant” below). The second is that you will be asked to submit a revised budget. If this is the case, you will need to re-think the project thoroughly to determine which facets can be completed within the lower budget. This is likely to involve changing the scope of the project, perhaps narrowing it geographically or choosing a smaller sample size. You might consider doing a smaller part of the research as a pilot project. The important point to remember is that a revision of the budget means a revision of your project planning.

3.5.4. *Managing Your Grant*

Until you get the funds, it seems like all your worries will be over if only the funding comes through. Once you have it, however, new concerns and obligations come into play. The processes that follow formal acceptance of an award entail obligations to both your own institution and the body that has given you funding. The efficient management of your grant will give you a range of new obligations. This will involve some or all of the following:

- Regular reports on the progress of the project.
- Regular financial reporting.
- Publicity and community outreach.
- Provisions concerning use of the funder’s logo, or name.

Most granting agencies require that you submit regular reports. You will be responsible for writing research reports, and usually financial reports, and for submitting them by the due dates. Your grant contract will specify which reports are needed. Your reports should inform your funders about the progress, challenges and outcomes of the project. If you need to produce a progress, or interim, report, it should include the following:

- Any re-statement of project aims, if these have changed over the course of the research.

- An outline of the activities and programs that have been carried out so far.
- Information on preliminary results and outcomes.
- Information on the work that needs to be undertaken in the immediate future.
- A detailed financial report that indicates how funds have been spent to date and what the current balance is.

When your project is completed, you will need to submit final reports. Most funding agencies will require both research and financial accounting. A final report should include the following:

- Project aims.
- Detailed outline of the activities undertaken.
- List of results and outcomes, including publications.
- Discussion of any difficulties that arose, and how you dealt with them.
- A complete, detailed financial report.

The acceptance of a grant also involves accepting a level of financial oversight over your project. There will be a plethora of rules to which you will need to adhere. While some grants, such as the ARC Discovery program, have one-line budgets, which allow you flexibility in how you spend the money (as long as this is consistent with the aims of the project), others will require you to gain approval from the funding agency for any budget change that reallocates funds from one item to another. You need to be aware of any such requirements *before* you start spending the money. In some circumstances, your institution will charge an overhead cost, which you will need to take into account. If you are not able to complete the project within the original estimated period, it is important that you discuss the situation with your funding agency as soon as possible. If you approach your grant-makers about this, and explain the situation, they almost certainly will agree to extend the project period so that the project can be completed. By approaching your grant-makers, you give them the opportunity to be generous. The alternative of completing the project late without approval will damage your reputation with those organizations and may diminish your chances of gaining additional funding from them in future.

Other obligations that come with funding are making certain that your grant-makers are acknowledged in appropriate ways, and assisting them to further their own aims (which you already know because you have targeted your application to them). This may involve you in acknowledging their support in any publicity that the project attracts, or in publications or conference presentations. For example, if the Ian Potter Foundation funds an overseas speaker for your conference, they must be billed as the “Ian Potter Foundation Key-Note Speaker”. In some cases, the funding body may require that you use their logo on materials that are associated with the project, such as interpretive pamphlets or conference programs. Regardless of whether or not they require it, it is good practice to recognize all of your sponsors in all publications and reports that arise from your project.

3.6. Why Submissions are Rejected

Many projects that are worthy of funding are rejected because the submission is deficient in some way. Some reasons for rejecting a submission include:

- The program criteria were not met.
- The deadline for application submission wasn't met.
- The guidelines of the granting body weren't followed.
- You submitted an incomplete application (including missing attachments).
- You submitted a poorly written and/or presented application.
- The aims and/or significance of the project was unclear.
- The literature review was inadequate or failed to demonstrate detailed knowledge of the field.
- The acknowledgment of previously published research was inadequate.
- The project had an unrealistic scope, timeframe or workload.
- The applicant didn't appear to have the required skills and/or track record.
- The project was deficient in approach and methods.
- The budget was unrealistic or was insufficiently detailed.

All this means that you have to take your funding application seriously. In some ways applying for funding is like applying for a job—if you really want it, then treat it as a major project. If you don't—i.e. if you rush it, or leave it to the last minute, or don't think it through carefully—your application is likely to be rejected and your time wasted.

3.7. The Funding Relationship

Funding involves a reciprocal relationship: you want funding for your project and the funding body has a mission to provide it. This is the basis for a perfect relationship! The trick is to turn this potential into an actual working relationship (which may well have some flaws or points of tension, of course).

The relationship starts when you first seek funding. When seeking support, especially from a foundation or industry partner, one of the first steps is to identify the key decision-makers in the organization. Try to make an appointment to see them to discuss your project, the assessment criteria, the average size of grants, and so forth. If you cannot get to see the people, try phoning them. The main purpose here is to make them aware of your project and to ensure that you tailor your application to meet their funding requirements and follow their application procedures. In addition, this is an opportunity for you to identify any problems they may have with your project and to address these in your application. Beyond this, you should be listening to see how you can shape your project so it fits more neatly with their aims. The closer the fit between your project and the organization's mission, the more likely you are to obtain funding. The establishment of a relationship is integral to this process. Like successful personal relationships,

successful funding relationships are based on good communication, and the desire to further the needs and objectives of the partner, not just your own. Two-way communication is fundamental to healthy relationships. Your funders should keep you informed about their requirements, especially if there are any changes that might affect you. Likewise, you need to keep them informed about your project, and communicate both your successes and the problems you have encountered. Some funding agencies value candid feedback on their programs, but we don't recommend this unless you are responding to a specific request. Your reporting, of course, is the main way in which you nurture your funding relationships, so you should be vigilant in this.

Like other organizations, funding agencies need to be able to show that they are conducting the work they are meant to be doing, in this case assisting individuals and organizations to further the mission of the funder. You can help them, not only through helping them to advance their agendas to fund specific types of projects, but also by giving them public recognition. The success of funding institutions is dependent on the extent to which their grantees achieve results that are congruent with their mission statement. From the point of view of a relationship, it is not unreasonable to think of your application less as a plea for funding than as a chance for the funding agency to support your project to help them achieve their own objectives.

References and Further Reading

- Brown, L. (2001). *Demystifying grant seeking: What you REALLY need to do to get grants*. San Francisco: Jossey-Bass.
- Carlson, M. (2002). *Winning grants. Step by step*. San Francisco: Jossey-Bass.
- Galbally, R. (2001). *Winning grants funding in Australia. The step by step guide*. Melbourne: Our Community.
- New, C. & Quick, J. (1998). *The grantseekers' toolkit: A comprehensive guide to finding funding*. New York: John Wiley and Sons.
- Philanthropy Australia (2004). *The Australian directory of philanthropy (2004–2005)*. Melbourne: Philanthropy Australia. This annual directory lists more than 420 trusts, foundations and corporate giving programs in Australia. Now in its 13th edition, it is a comprehensive reference on sources of non-government funding in Australia.
- Philanthropy Australia (2005). *Working with foundations in Australia*. Melbourne: Philanthropy Australia.
- Quick, J. (2000). *The grant winner's toolkit: Project management and evaluation*. New York: John Wiley and Sons.

Key Guides and Resources

Australian Heritage Directory: <http://www.heritage.gov.au/funding.html>. A site run by the Department of Environment and Heritage, aimed at community organizations conducting heritage work as well as other forms of cultural and natural heritage needs. This has useful links to grant programs and other sources of funds from within Australia.

- Australian Institute of Aboriginal and Torres Strait Islander Studies: www.aiatsis.gov.au. AIATSIS is a major national funding body for research in Australian Aboriginal and Torres Strait Islander studies.
- Australian Research Council: <http://www.arc.gov.au>. The ARC is the major provider of research funding in Australia. This site has details on all programs it administers, and on previously successful grant projects.
- Chronicle of Philanthropy: <http://philanthropy.com/>. This is a solid source for nonprofit news and issues.
- IDP Education Australia Limited (IDP): <http://www.idp.edu.au>. This has a comprehensive database on more than 1,000 Australian institutions, including universities, vocational education and training institutes, English language colleges and schools.
- Joint Academic Scholarship Online Network (JASON): www.jason.edu.au. This has the most comprehensive database of undergraduate and postgraduate scholarships for study in Australia.
- Perpetual Trustees: <http://www.perpetual.com.au>. Perpetual is trustee or co-trustee for over 400 charitable trusts. It receives over 1,000 applications annually for funding from not-for-profit groups and distributes close to \$A 30 million each year.
- Philanthropy Australia: www.philanthropy.org.au. This is the national membership organization for Australian grant-making trusts and foundations. It serves more than 200 trusts and foundations (private, family, community and corporate) and publishes a quarterly journal, *Philanthropy*, and an annual list of trusts and foundations and details of how to contact them.
- Proposal Writing for Grants: A resource bibliography (<http://colt.ucr.edu/bibgrants.html>) has been compiled by Rita Gibson and provides good coverage of further sources and guides.
- Prospects: www.prospects.ac.uk. This contains postgraduate funding opportunities and tips for students in the U.K.
- Resources for Grant Applications, Bond University Library: <http://www.bond.edu.au/library/Resourceguides/InfoSheets/GrantApplications.htm>. This site has excellent links to grant registers and funding databases, including GENIUS (Global Expertise Network for Industry, University and Scholars) and SPIN (Sponsored Programs Information Network).
- The Association of Commonwealth Universities: www.acu.ac.uk. Contains details of grants and fellowships administered by the Association.
- The Foundation Center: www.fdcncenter.org. This is a good source of information on funding in the United States. Consider subscribing to one of their free E-newsletters. It is even better if you can visit one of their offices to go through their databases.
- The Grants Register*. A world-wide register of funding programs, published annually by Palgrave MacMillan.
- U.S. International Grantmaking Project (Council on Foundations): <http://usig.org>. Although this site is aimed at anyone interested in providing (rather than receiving) grants outside of the United States, it gives you the grant-maker's viewpoint on the funding relationship.
- Volunteering Australia: <http://www.volunteeringaustralia.org>. Although they don't usually include much archaeology, Australia has a network of volunteer resource agencies operating at regional, state and national levels.

4

Living It Up Down Under: Working in an Australian Setting

Australia is a continent, an island and a country. Often referred to as “the big country”, it is the sixth largest country in the world. It is 50% larger than Europe and about the same size as the 48 mainland states of the USA, but has a population density of only two people per square kilometer—the lowest in the world. The Australian landmass separated from the other continents over 50 million years ago, providing a setting for the development of unique flora, fauna, and habitats (Department of Foreign Affairs & Trade, 2005). Because of its unique environmental setting, Australia poses particular challenges for archaeological fieldwork, which will be discussed in this chapter. We also consider the nature of the Australian character and lifestyle, and how this impacts upon archaeological practice, and some of the practical issues that need to be navigated by any overseas archaeologist who wishes to work in Australia.

4.1. Climate and Environment

The Australian seasons are the reverse of those in the northern hemisphere: when people are floundering through snow in Europe or North America, they are swimming or surfing in Australia, and when people are enjoying summer in the north, Australians are experiencing a non-centrally-heated winter. Australian winters, however, are relatively mild, and only a few parts of the country ever see snow. Because it is a big country, Australia has a wide variety of environments. The Australian climate ranges from arid and semi-arid in the interior, to mediterranean in the south, maritime and subtropical in the east and tropical in the north (Figure 4.1). The northern section of the continent experiences a monsoonal climate, with a distinct rainy season known as “The Wet”, which spans from November to April. Around 60% of the landmass is classified as arid (desert) or semi-arid (Arthur & Morphy, 2005b:28). Most of the country receives more than 3,000 hours of sunshine a year, around 70 per cent of the total possible sunshine hours. As you can imagine, summer in Australia is not like summer in the northern hemisphere—it is much hotter, lasts longer and the Ultra Violet radiation is more extreme (which has definite health and safety implications—see section on “Slip, Slap, Slop”).

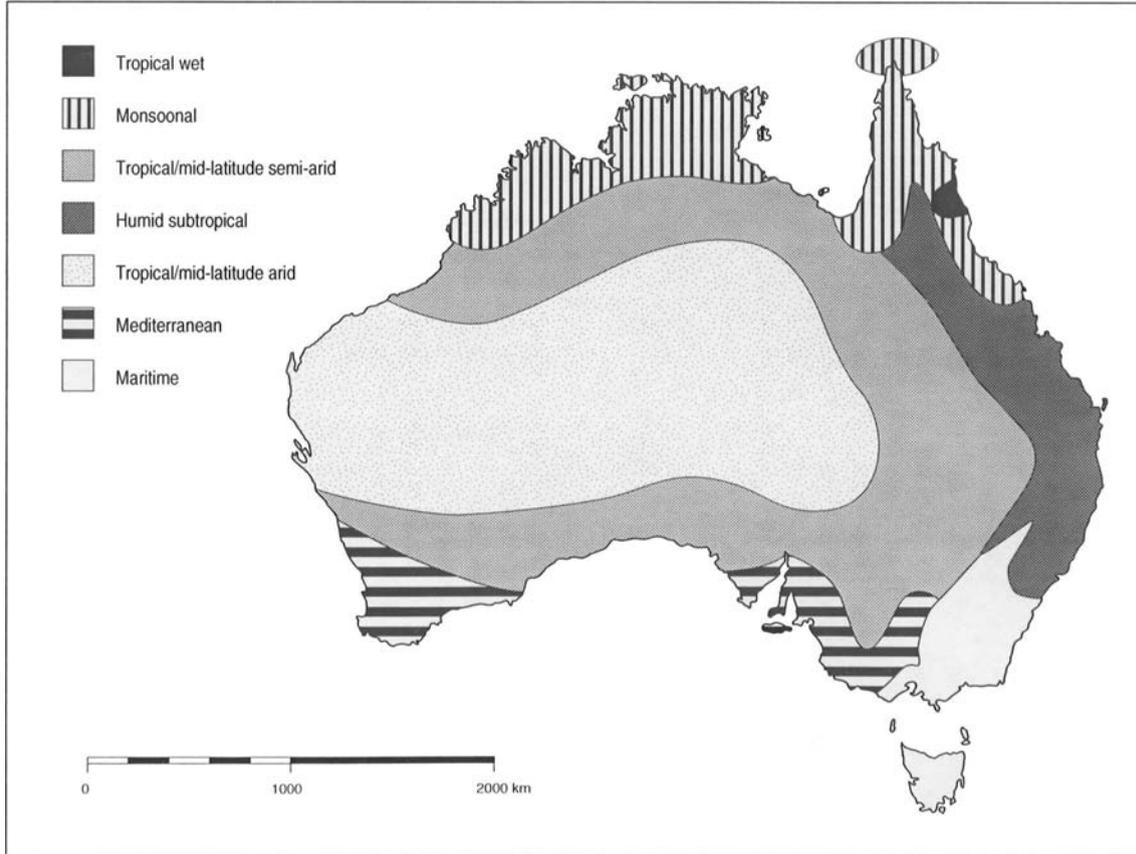


FIGURE 4.1. Climatic regions in Australia (after Arthur and Morphy (2005b)).

Australia has some of the greatest biodiversity in the world. This has been the basis for the listing of 14 World Heritage wilderness areas, the most well known of which include Uluru (previously known as Ayers Rock) National Park and Kakadu National Park in the Northern Territory, the Great Barrier Reef in Queensland, and the Coorong region in South Australia. While the red earth of the outback characterizes much of Australia, Australia also is a land of lush forests, many of which are located close to major metropolitan areas. In terms of flora and fauna, most people are aware of animals such as the kangaroo, koala bear and the platypus, but these are only a small sample of Australian biodiversity. For example, Australia has around 750 species of birds, 350 of which are unique to this country (Department of Foreign Affairs & Trade, 2005). There are 55 species of parrots in Australia, colorful and often spectacular. In addition, Australia has 20,000 species of plants, including living fossils such as the Wollemi pine and the grass tree, and many brilliant species of wildflowers. This biodiversity occurs in the sea, as well as on land. Australia's marine environments contain more than 4,000 fish varieties and scientists estimate about 80% of Australia's southern marine species are unique to this part of the world (Department of Foreign Affairs & Trade, 2005).

4.2. The Australian Character and Lifestyle

A fundamental part of doing archaeology in Australia is working within the Australian archaeological community. To grasp the character of this community, however, it is necessary to have some appreciation of the Australian character and lifestyle as a whole, which are themselves shaped by our environmental setting and social history. Encouraged by a mild climate, the Australian lifestyle is one that looks for amusement outdoors, rather than indoors. Australians are great sportspeople, and between 60 and 70% of us are involved in some kind of sporting activity on a regular basis, either as participants or as spectators (e.g. Sport & Recreation Victoria, 1997). Australia has over 7,000 beaches and many of our outdoor activities revolve around the beach, the surf and the sea. Our favorite activities include swimming, surfing, fishing, sailing and water-skiing. We downplay our religious beliefs and many of us are obsessed by sport. The results of horse races are included in televised news, and when the Olympics are on, the choices on our major television stations are Olympics, Olympics . . . or Olympics. In the summer, the television choices can well be between cricket, cricket and tennis. In the winter, the choices are between the various forms of football. Many of our heroes have been sporting champions and sport remains an integral part of Australian nationalism (Blainey, 2001).

Australia has a colloquial language that can be confusing to those not familiar with it. While some expressions may be well known to you or relatively easy to work out ("G' Day", for example, for "good day"), others can be difficult. Sometimes, Australians customize their words by shortening them or adding an

“ie” to the end of a word (see Mark Moore’s Pocket “Dig-Lingo” Translator). Occasionally, a phrase will sound like a single word such as “owyagoin”, which means “How are you going?”, or “waddayareckon” which means, “What do you reckon?”. While the Australian accent tends to be a little more pronounced in country areas than in the city, it remains fairly constant across the country. In contrast to the regional linguistic differences that exist in the United Kingdom and United States, in Australia someone from Perth will have much the same accent as someone from Sydney or Darwin.

Mark Moore’s Pocket “Dig-Lingo” Translator

One of the main differences you are likely to note in Australia, and, indeed, one of the best parts of the experience, is the language people speak. Yes, they do speak English in Australia, but it is often an English that is heard nowhere else. Australian slang changes old words and creates new ones: as a general guide, any word longer than two syllables is usually chopped in half, and “ie” or “o” added to the end of it. So, for example, “Brekkie” is short for breakfast, “Chockie” short for chocolate, and “Arvo” short for afternoon. Aussies (pronounced “Ozzies”) have alternative words for almost everything, and this applies to archaeology. In Oz, for example, an arbitrary level is called a “spit”, and a screen is called a “sieve”. A “digger” is an Australian or New Zealand war veteran, not an archaeologist. The term “thongs” in Australia usually refers to a form of footwear (the equivalent of flip-flops) and “pants” to underwear, including fancy ones like thongs. In either form thongs are not usually considered good survey wear, but in Queensland and the Northern Territory thongs (on the feet) are proper pub attire. I’ve even had Aboriginal reps survey in thongs. Depending on where you come from, you may also hear the words “Yank” and “Pom”, which are general (if not affectionate) terms denoting a citizen of the United States and the United Kingdom respectively.

Useful Words to Know ([AUS] Lingo = [US/UK] Language)

[AUS] University (“Uni”) = [US] College.

[AUS] Ute = [US] Pickup truck.

[AUS] Dumpy = [US] Survey instrument.

[AUS] Leveling = [US] Taking readings with a survey instrument.

[AUS] Plan = [US/UK] Map.

[AUS] Mud map = [US] Sketch map.

[AUS] Sieve = [US] Screen.

[AUS] Spit = [US] Arbitrary level.

[AUS] Sounding = [US] Test pit.

[AUS] Dodgy (also bodgy); Dog’s breakfast = [US] Not up to professional standards.

[AUS] Billy = a light metal container with a handle (often a modified fruit or coffee tin). Boiling tea in the billy is peculiarly Australian. Aussies will often get all giddy when the billy is boiled during working hours and, like enthusiastic “grog” (alcohol) consumption, this is a fundamental bonding ritual, so don’t make fun of it. Never reject an offered “cuppa” (often a cup of tea with bits of leaf floating on the top; learn to strain it through your teeth).

[AUS] Smoko = [US/UK] Break. Obviously “smoko” is the most important word to learn (and listen for) during fieldwork. Smoko might consist of various forms of “tucker” (food), including “bikkies” (cookies), “sangers” (sandwiches), or “lollies” (candy), and, of course, a “cuppa” (either tea or coffee).

[AUS] Tea = [US] 1. A hot beverage; 2. The time of the day when hot beverages are consumed, or the evening meal, depending on context.

[AUS] Akubra = [US] Hat. An Akubra is an iconic brand of Australian head-gear made from felted rabbit fur. Many Aussies do not consider baseball caps “hats”—in fact, some Aussies are unaccountably annoyed by them. You may be asked by dig supervisors to upgrade to an Akubra or equivalent broad-brimmed version, ostensibly to keep your brain from frying. Don’t be offended.

[AUS] Swag = [US] A thin mattress inside a waterproof canvas cover that functions as an instant bed and tent in one. Australians will roll their swag out anywhere (except on anthills and under gum trees).

[AUS] Quartpot = [US] Small, individual sized billy with a cup that doubles as a lid. Not to be confused with a serving of beer.

[AUS] Whinger = [US] A whiner, someone who complains all the time.

Useful Phrases to Know on Site

[AUS] “Pack the esky mate” = [US] “Please organize lunch and place it in the cooler”.

[AUS] “The dumpy is cactus” or “The dumpy has carked it” = [US] “The survey instrument appears not to be working”.

[AUS] “Smoko? Bloody oath mate” = [US] “Yes, I too think that now would be an appropriate time for a break”.

[AUS] “Get into it you bludgers” = [US] “Please increase your pace somewhat, you lazy people”.

[AUS] “Mate” (while looking at some aspect of your work) = [US] Depending on inflection, “Wow, you did a fantastic job” or “I am speechless with contempt”. Listen carefully.

[AUS] “You’re a legend”; “Bloody hell” = [US] As above.

[AUS] “The biro is in the bum bag” = [US] “The pen is in the fanny pack” (Important note: ‘fanny’ to an Australian is a part of the human anatomy peculiar to females).

[AUS] “I’ll barrack for you” = [US] “I’m rooting for you”, usually in reference to a disagreement with the boss. (Important note: “root” to an Australian is an impolite word for having sexual relations).

[AUS] (Much laughter and animated gestures with shovels) = [US/UK] Infer that a venomous snake and/or spider has attacked a coworker. If possible, retreat to a safer position.

... *at the End of the Day*

[AUS] “My shout” = [US] “I’ll buy this round.” (Important note: The speaker has engaged you in a reciprocal relationship. You are expected to cover the next round. See below.)

[AUS] “It’s your bloody shout mate” = [US] “It’s your turn to pay for everyone’s drink”. If it becomes necessary for an Aussie to say this to you, you’re probably in serious breach of pub protocol.

[AUS] “Score a slab of heavies mate” = [US] “Let’s spend the night drinking a case of non-lite beer, at your expense.” In Australia a case of beer is referred to variously as a slab, a carton or a box.

[AUS] “Aw, mate, you should have got stabbies” = [US] “I would have preferred consuming my beer from a bottle rather than a can.” (You should be aware that “stabbies” are also a type of men’s tight, dark blue work shorts. Stabbies, thongs [the footwear version], and a “jackie howe” [a tight-fitting tank top named for a famous sheep shearer; I’m not making this up] are iconic summer fashion.)

When ordering beer, ask for pots in Qld and Victoria, middies in NSW and WA, and schooners in SA. These are all equivalent to a 9 ounce glass, but gauge your co-workers carefully: many Aussies will only consume beer from bottles (stabbies). Finally, for the morning-after coffee, order a short black (a very small cup of very strong coffee, usually sweetened/no milk), short white (cup/milk), long black (cup/no milk), or long white (mug/milk).

Mark Moore worked as a contract archaeologist in the US for many years before immigrating to Australia. He is presently a Postdoctoral Research Fellow at the University of New England.

In contrast to other countries, the Australian archaeology community is small. The Australian Archaeological Association normally has around 550 members. Everyone knows, or knows of, everyone else, so your reputation will carry you a long way in this community (or not). We tend to assess people on personal qualities, such as sense of humor, and field skills, rather than on structural factors such as institutional employment. Like the Australian society as a whole, the Australian archaeological community has a strong anti-establishment ethos, rooted in our convict origins, often characterized by “mateship” and gendered as male (Ward, 2003; see also Lake, 1999 for critique). This anti-elitism (see Sawer & Hindess,

2004) means that we have little tolerance for people who “skite” (boast) about their achievements, so this is a good country in which to display modesty. In fact, we use the word “ambitious” as a derogatory term. We are suspicious of successful people, often assuming they are unethical or corrupt, even if we cannot identify how, and our heroes are often slightly villainous (for example, the bushranger Ned Kelly). Our egalitarian ethos is apparent in what we call the “tall poppy” syndrome, whereby successful people who stick their heads up are cut down to size:

Every country needs heroes, and perhaps villains. And in embracing its heroes, a nation will often reveal as much about itself as about the qualities of its heroes. It is sometimes said that Australians traditionally are suspicious of heroes and look for the chance to cut them down to size. Should all people be roughly equal? This tantalising question was debated around kitchen stoves and in public houses even when Ned Kelly was a lad. Compared to the British Isles, the idea of equality rode high in Australia. Indeed Australia was often viewed, rightly or wrongly, as the land where the tall poppy was deliberately cut down (Blainey, 2001).

In Australian comedy, this anti-elitism manifests itself in programs such as “The Chaser. Striving for Mediocrity in a World of Excellence” (see <http://www.chaser.com.au>). In this regard, Australians are unlike Americans, who often assume they are the best in the world at whatever they do, whether they are or not, or the British, who have inherited a sense of superiority as part of their colonial legacy. In contrast, Australians are wary of appearing to be too successful and tend to minimize their accomplishments in order to fit in with their peers. This is a characteristic of both Indigenous and non-Indigenous Australians.

George Merryman’s Survival Tips for Fellow Americans Stranded in Australia

Australians like to drink. Need proof? Just look at the language. Words evolve to serve the needs of a particular society or culture. For example, Inuits (Eskimos) have 40 words for snow, desert-dwellers have a surplus of words for sand, while Australians lead the pack in synonyms for getting drunk: blind, pissed, off your face, off your tits, paralytic, legless, rat-arsed, smashed, stonkered, stewed, screwed, full as a fart, full as a goog, ripped, loaded, rotten, full as a state school, out of it, out of your tree, tanked, cactus, kaput, damaged, wrecked. (Before getting too smug—no one can match America’s list when it comes to talking about idiots.)

Australians do not trust people who do not drink. If you are a non-drinker, might I suggest you do as I did and create a pre-existing medical condition as an excuse for not imbibing? I tell Australians I cannot drink because I have only one kidney. I tell them I donated the other one to Gary Coleman (the black American child actor from TV’s *Different Strokes*). Kills two birds with one stone. As apathetic as Australians like to appear, they’re secretly conflicted—both attracted and repelled by America and American celebrity. My Gary Coleman story forgives my abstinence AND provides a bit of overseas glamor. But be warned: when telling your brush with fame story, initial awe on the part of the

listener may turn to aggro (Australian for aggravation). The listener's thinking: "What do I care? Gary Coleman's no better than me. And who are you to have your kidney chauffeured around LA, being abused by an out-of-control former child star?" To avoid sounding conceited (what Australians call "having tickets on yourself"), I quickly add that, unfortunately, the transplant didn't take. Coleman's body rejected my kidney. Often, celebrity-bashing ensues. Most frequent response: "Ungrateful little shit".

This phenomenon is so common it has a name: the tall poppy syndrome. The idea is that if you stand too far above the crowd, someone will come along and chop off your head. The tall poppy syndrome partially explains Australia's animosity towards America. (Yes, Australia can be included on the growing list of countries that hate America. It's not burning-US-flags-in-the-street hate. It's more of a roll-of-the-eyes-and-a-mumbling-under-the-breath kind of a version.)

From whence does this come? Historically, Australia and America have been mates. Since early last century, Australian foreign policy has been closely aligned with the United States. During World War II when Australia was under threat, America sent troops to fight alongside Australian soldiers. (Great Britain was otherwise engaged with the war in Europe.) A military friendship was forged which remains. In recent years, however, Australian public opinion has turned against the near-automatic support of American military commitments. Who can blame them? No one likes to think their government is a mere lap dog for some greater world power. Australians also are not too fussed on recent Free Trade Agreements that threaten to strangle local industries.

The good news is that, although Australians are suspicious of Americans collectively, ironically, they tend to feel quite differently about them individually. My advice? Put your best foot forward. Talk less, listen more. Don't do as I did: I never shut my trap. "That's not how we do it in America . . . etc." As a consequence, I could only ever go anywhere twice. And the second time was to apologise.

George Merryman is a quiet American living in Australia.

Despite occasional forays into liberalism, substantive tracts of Australia remain essentially conservative, both socially and politically. The most conservative areas are central Australia, northern Australia, and some country districts. This conservatism is most likely to affect you directly if you are working with Aboriginal cultural heritage. Sometimes people in country areas are wary about archaeology because they fear that the recognition and recording of Aboriginal sites on their property might make it subject to land claims by Aboriginal groups. However, finding an Aboriginal site anywhere in Australia is never (and never has been) the basis for a land rights claim—it is simply that the majority of people don't understand how land rights work and feel threatened by anything that demonstrates prior Aboriginal presence. Similarly, Native Title has been extinguished in most parts of Australia where there are pastoral properties, and in all urban environments with the exception of Crown lands (see Lilley, 2000). The main skill you will need to

draw upon in such a situation is simply diplomacy—trying to help people understand what archaeology is and what it is for, and reassuring them in the process.

While doing archaeology is a challenge no matter what country you are in, in Australia it can be particularly tough. If you are from another English-speaking country, you could be lulled into thinking that doing archaeology in Australia will be just like doing it at “home”, only in a more exotic location. While this is true to some extent, there are also significant national characteristics you will have to take into account. Australians are not polite or restrained in the British or American traditions. Usually, we say what we think. This is a good thing, in that you will know where you stand with Australians (because they’ll tell you) but it can be confronting if you come from a cultural tradition that is less forthright. Australians are a resilient people, hard on themselves and on each other. They expect people in the field to be able to “hack it”—to endure hardship without complaint—and they have little tolerance for weakness or whingeing. Often, archaeological sites are located in remote areas where survival has to be taken seriously, rather than for granted, so being able to cope with the demands of the Australian environment will be important.

4.3. General Health and Safety Down Under

Australia is a safe country. There is no place that we can identify as somewhere you should avoid, or in which you have to be particularly careful. It really is friendly and safe wherever you go. You will encounter few health hazards and hygiene standards are high. Being an island, Australia is protected from many of the diseases, such as rabies, mad cow disease and avian flu, that are present in other parts of the world. However, like any other country, Australia has health risks that are specific to its particular location. Below is a brief outline of some of the issues you need to take into consideration, and advice on how to best ensure your health and safety whilst in the land down under.

4.3.1. *Hitchhiking*

It is not a good idea to hitchhike in Australia. The “backpacker murders” by Ivan Milat brought this message home to Australians. There are good public and private transport facilities between and within most cities and towns.

4.3.2. *Health Insurance*

When visiting Australia, you will need to have comprehensive health cover. However, emergencies will be dealt with by a hospital without you needing to show your credit card first. If you do not have health care, and do not come from a country that has a reciprocal health care agreement with Australia (see below), all is not lost. If you get sick or have an accident, the hospital will see you—but they will send you a bill afterwards for full recovery of the costs.

4.3.3. Medicare

Australia has a comprehensive public health care system, known as Medicare. While eligibility is generally restricted to permanent residents of Australia, there are reciprocal health care agreements with a range of countries, including New Zealand, the United Kingdom, the Republic of Ireland, Finland, Italy, Malta, the Netherlands and Sweden. For further information see the Department of Health and Ageing* (www.health.gov.au).

4.3.4. Vaccinations

Vaccinations are not necessary unless you have come from, or visited, a yellow fever-infected country or zone within six days before arrival. For further information, go to the web sites for the Department of Health and Ageing (www.health.gov.au) and the World Health Organization (www.who.int/en).

4.3.5. Medications

On arrival, you will need to declare any medicines you wish to bring into Australia. It is a good idea to carry a letter or prescription from your doctor outlining your medical condition and the prescribed medication. Otherwise, you could have a problem taking your medicines into the country. This can be a serious problem if these medicines are essential to your daily well-being, as you may not be allowed to enter the country while carrying the drugs.

Julie Kohlhagen's Tips for Preparing Your Visit to Australia

- While there are no compulsory vaccinations needed to enter Australia (see above), it is a good idea to get a vaccination for influenza and make certain that your hepatitis shots are up-to-date.
- Unlike some other countries, antibiotics cannot be bought over-the-counter in Australia. They can be obtained only through a prescription from a doctor.
- Learn to swim. Australia has wonderful beaches, and you will want to enjoy them.
- When you arrive, learn to read surf conditions, even if you are not a "surfer". When you are here, take one of the local courses that teach you how to "read the rips". The University of Newcastle in New South Wales, for example, runs one such course through its student union.
- For information on a range of health issues, including media releases, fact sheets, health publications and quick links, go to www.health.nsw.gov.au.

Julie Kohlhagen is a registered nurse in the High Dependency Unit, John Hunter Hospital, Newcastle.

4.3.6. *Lions and Tigers and Bears?*

You will be pleased to know that Australia does not have wild animals, such as lions and tigers and bears. The only bear in Australia is the koala bear and the vast majority of the wild animals that are dangerous are not native species. The main introduced, and now feral, species are camels, pigs, donkeys, goats, buffaloes and horses (known as brumbies). These have spread throughout much of Australia, especially in the north. While donkeys, goats and brumbies are unlikely to worry you unless you worry them, feral pigs are a different matter. There are numerous stories of bushwalkers spending several hours up a tree waiting for a wild pig to go away. Large boars can weigh 130 kg (over 600 pounds) and may have tusks as long as 8 cm (3 inches). They can reach speeds of 40 km/hr (25 mph) over short distances, so if you meet one you will not be able to outrun it. If you do encounter a feral pig, don't annoy it. If it charges, don't run—act like a bushwalker, climb a tree and wait for it to go away. Likewise, don't try and pat an emu (they like bright things and they might try and peck your eyes) and don't approach a cassowary, as they have nasty talons, and are not afraid to use them.

4.3.7. *Snakes, Spiders, Mosquitoes and Ticks*

Snakes are the biggest wildlife risk in the bush and Australia is home to dozens of species, some of them amongst the most venomous in the world. There are 80 species of venomous terrestrial snakes, and 32 species of venomous sea snakes. Those that are most likely to concern you (although we hope you never meet any) are the Taipan, King Brown, Death Adder, Rough-Scaled Snake, Tiger Snake, the Red-Bellied Black Snake and the Brown Snake (Glen Ingram, personal communication, March 21st, 2006).

The best way of dealing with snakes is to give them a wide berth. Look before you step over logs, be careful when lifting bark or timber, and don't poke around rock crevices, hollow logs or burrows. When walking in the bush, wear sturdy boots that come at least as high as your ankles. Keep your eyes on where you are walking. If you see a snake, stop and remain still. If the snake is curled up and quiet, detour around it. If the snake is moving or looks like it intends to move, stay put. Keep quiet and do not move. Most snakes aren't aggressive and would rather flee than fight. If they feel threatened, however, they may attack a moving target, so even if the snake is moving towards you, stay still. Though some snakes are poisonous, if you leave them alone and give them a wide berth, most will choose to move away from you as quickly as possible. When the snake has moved away a safe distance, move off slowly and quietly.

If you are bitten by a poisonous snake you will soon exhibit one or more of the following symptoms: one or two fang marks (plus scratches), pain at the bite site, impaired vision, headache, nausea and vomiting. If bitten, immediately apply a tight, broad pressure bandage by wrapping it around the bite site firmly, but not too firmly, and then continue upwards on the affected limb as far as you can. Avoid any unnecessary movement, as this will pump the poison through the lymphatic

system. Apply a splint to keep the limb immobile and seek medical help. *Handy hint (snake photo opportunity)*: If possible, take a photograph of the snake, or get a good description of it. If you can take this with you the medical staff will know which antivenin to use.

Spiders are another wildlife risk in Australia, both in the bush and around suburban homes. As with snakes, Australia has some of the most venomous species of spiders in the world. Those that are dangerous—but only potentially fatal—are the redback spider, which occurs throughout nearly all of Australia, the funnel web and the trapdoor, which are mostly found mostly on the east coast (Glen Ingram, personal communication, March 21st, 2006). A spider identification chart is available on the web at <http://www.anoble.com.au/Spiders/SpiderID.htm>.

A redback spider bite is sharp and painful, and usually occurs on the hands or feet. The area near the bite has a red mark and begins to swell. Until treated, the pain spreads, muscle spasms occur and the victim begins to feel nauseous. The treatment for this kind of bite is to place an ice pack (which can be made from ice cubes or a packet of frozen peas wrapped in a wet cloth) on the bitten area to lessen the pain, rest, so that you do not circulate the poison around your body, and call an ambulance immediately. Do not attempt to drive yourself to hospital. The funnel web spider's bite is also painful. This spider has particularly strong fangs and has been known to pierce fingernails and even aluminium cans. Sometimes, this spider bites multiple times. The treatment for this form of spider bite is to use the pressure-immobilization technique, following the rest of the procedure as for snakebites, listed above. *Handy hint*: Do not wash the spider bite in water or do anything else to the wound other than the advice above. This will make it easier for medical staff to identify the species of the spider that had the temerity to bite you.

There are other venomous creatures that are a risk during fieldwork. While we don't have malaria in Australia, you will need to protect yourself from mosquitoes, which can transmit three nasty viruses, known as Ross River Fever, Barmah Forest and Japanese Encephalitis. Here, mosquito repellent is your best health protection. When walking in the bush wear long sleeved shirts and long pants, tuck your pant legs into your socks or boots and tuck your shirt in as well—this will help to prevent ticks, leeches and other nasty creatures from travelling inside your clothing. If you do get a tick, remove it by levering it out carefully with a pair of tweezers, grabbing it as close to its mouth as possible. Do not squeeze or pull the tick, or try to cut it out.

4.3.8. *Seas, Swamps and Surf*

Australia is an island, surrounded by breath-taking beaches and with a climate that can be perfect for maritime archaeology. However, maritime archaeologists face particular challenges when working in Australian conditions. These challenges involve an array of underwater creatures that are not always kind to humans. In the sea, the creatures you need to be particularly cautious of are crocodiles, sharks and box jellyfish. In inter-tidal zones, watch out for the blue ringed octopus.



FIGURE 4.2. Valencian archaeologists, Inés Domingo Sanz and Dídac Román at crocodile warning sign, Kakadu National Park, Northern Territory.

There are two types of crocodile in Australia: saltwater crocodiles, which can be aggressive and eat people occasionally, and Johnson River, or freshwater, crocodiles, which are timid, and only eat fish. Saltwater crocodiles grow to more than 20 feet (6 m) in length. They live in estuaries and rivers, as well as in the sea, and have been found in rivers up to 300 km inland. When in crocodile country it is important that you observe all warning signs and do not take unnecessary risks. The basic rules are: don't swim in waters inhabited by crocodiles, camp at least 50 m from the water and never clean fish or discard food scraps near the water's edge. Areas where crocodiles have been sighted are usually signposted (Figure 4.2), but even if there is no warning sign, be alert at any river, tidal creek or estuary in northern Australia.

Crocodiles are lazy and territorial—and, like sharks, solitary. There is no such thing as a “pack of crocodiles”. In the sea, they normally swim alone and in the more shallow levels. If you are a maritime archaeologist, and unfortunate enough to meet a crocodile while in the water, stay still, or hide under a rock, if you have time to do this discreetly—if you swim away quickly, you identify yourself as prey. Also, if a crocodile gets too nosy, take the regulator from your mouth and point it towards it, as the bubbles may startle it into moving off. And be bold: while we don't know of any maritime archaeologist who has been attacked by a crocodile, we have heard of one Australian diver who took off his diving suit, stuffed it in the crocodile's mouth, and swam away safe and sound.

While the word “shark” may strike fear into your heart, sharks rarely kill people. Out of more than 340 species of shark worldwide, only a few attack people and many of those occasions have been due to provocation or irresponsible behavior. Still, sharks are a risk that maritime archaeologists need to take seriously, as Australia is home to dozens of species, and some of these are dangerous. Those species that are of most concern are Tiger Sharks, the Hammerhead, the White Pointer, the Great White Shark and some of the reef whalers (e.g. Bronze, Grey, or Silvertip). Also, you should be aware that the Bull Whaler is sometimes found a long way up rivers, although its normal habitat is closer to the sea. The majority of tropical shark species found around coral reefs are small and harmless, and will swim off as soon as they see you. Often, potentially dangerous sharks are attracted to people due to careless behavior, such as throwing fish scraps into the water. Sharks have an amazing sense of smell, and can detect blood in water from a great distance.

4.3.9. *Blue-ringed Octopi and Jellyfish*

While swimming in lakes is normally safer than swimming in the sea, there can be a few nasty, bitey things in inter-tidal zones as well. The one that you really have to be careful of is the blue-ringed octopus. This octopus inhabits saltwater estuaries, rivers and lakes. Its habit is in the shallow water around wharfs and rock pools, and its bite can be fatal. It is a particularly attractive creature, likely to be admired by children and people from overseas. Also, if you poke it, it becomes even prettier, as the bands around its tentacles glow florescent blue. However, this glowing is actually an indicator that it is preparing to defend itself—i.e. attack you. The important thing to know here is that, although the bite may not hurt, but just feel like a “nip”, the octopus has injected you with potentially fatal neurotoxins. Our best advice here is to leave these creatures alone. If one bites you, get someone to take you to a hospital (you won’t be able to drive yourself). You could also try the snakebite bandage technique, outlined above. This may also be a good time to write your will.

Several species of venomous jellyfish call the waters of northern Australia home. The most dangerous is the Box jellyfish, found in northern waters from Gladstone in Queensland to Broome in Western Australia. The sting from a Box jellyfish can be fatal and during the high risk months of November to May (or October to April to be on the safe side) special nets are placed around the beaches of Darwin and other major population centres along the coast of Queensland. This mostly works for bathers, but does little to extend the scope of viable maritime archaeology. If you are undertaking maritime archaeology outside these areas in the high risk time of the year (and against our strong advice), take comfort in the fact that you will get some protection from your diving suit—and obviously, the longer the arms and legs on the diving suit the greater the protection it will afford. The other kind of jellyfish to be aware of is actually at least five closely related species, often referred to collectively as “Irukandji” (or Irrukanji) jellyfish, because they cause a painful and potentially severe set of symptoms known as Irukandji syndrome.

These tiny jellyfish are mostly found in waters north of the Tropic of Capricorn and can be small enough to swim through safety nets. Their sting is not necessarily lethal (although it can be; it is certainly extremely painful) and a close-weave lycra or stocking-material body suit will be sufficient to protect you. The peak season for Irukandji syndrome is between November and May.

Georgie's Jellyfish Story

I was preparing for my first dive on the world-renowned Great Barrier Reef, when the instructor issued a last minute warning. He said, "If you get stung by a Bluebottle jellyfish, we will pull you onto the boat, give you the anti-venom, and take you to the hospital when we get back to shore. If you get stung by an Irukandji jellyfish, we will pull you onto the boat, give you the anti-venom and rush you to the hospital. If you get stung by a Box jellyfish, we'll try to make you as comfortable as possible".

George Merryman is a comedy writer who cannot swim. This book isn't dedicated to him, either.

4.3.10. Too Hot? Slip, Slop, Slap

Australia is a hot country, and Australians are trained from birth on how to protect themselves from the heat. People from other countries, especially from the northern hemisphere, have to learn the survival strategies that are "background" for Australians. This has been inculcated in the "slip, slop, slap" heath campaign run by the Australian government over the last few decades. The basic message is to "slip" on a shirt, "slop" on some sunscreen and "slap" on a hat.

Apart from sunburn, melanomas and so forth, the main damage you are likely to incur from the sun is heat exhaustion or heat stroke. Heat exhaustion usually occurs when people are physically active outdoors and not drinking enough water, sometimes because they have forsaken water for alcohol. The main symptoms are dehydration, headache, a rise in body temperature, sweating, nausea, and feeling lethargic, confused, dizzy and disoriented. The treatment is to move the affected person into the shade or a cool environment immediately. Remove any restrictive clothing and slowly begin to administer small sips of water. You can also fan the person and wipe a cool wet cloth over their face and body. Heat stroke has the same cause and symptoms as heat exhaustion, but is at a more advanced stage, when the body has lost too much fluid and body temperature is out of control. The level of disorientation can indicate whether someone is suffering from heat exhaustion or heat stroke. Also, they may start shivering, exhibit a level of aggression and reject drinking water. Treatment is the same as for heat exhaustion, but you may need to take them to a hospital for re-hydration. Finally, there is no substitute for first aid training from a qualified instructor. The

Australian Red Cross* offers a range of first aid courses and first aid kits to cater for virtually any emergency. For further information, see www.australianredcross.org.au.

Bobby McAskill's Tips for Surviving the Australian Sun

- Start when you are a baby and don't let your mother put you out for "healthy" sunbaths (which was all the rage when I was a baby).
- When outdoors apply a broad-spectrum SPF 30 + sunscreen, one that blocks both UVA and UVB ultraviolet light. Zinc cream comes in an attractive range of colors, such as florescent green and pink.
- Reapply sunscreen every 2 hours.
- Use colorless chapsticks to protect your lips.
- If you must use cosmetics when in the field, choose some that include sun protection.
- Wear a broad-brimmed hat.
- Sit in the shade whenever possible, especially when the sun is at its strongest, between 10 am and 3 pm: "Between ten and three sit under a tree."
- Wear dark sunglasses, preferably wraparound to protect against eye damage. Suitable sunglasses can be purchased from the Australian Cancer Council.
- Wear light-weight, loose fitting clothes with long sleeves that will protect you from the sun. Remember, however, that a T-Shirt only blocks out 50% of the sun's rays.
- Wear cotton clothes, which "breathe", not synthetics, which will not protect you from UV rays and are uncomfortable, as they do not facilitate the evaporation of sweat.
- Take adequate water whenever you are on a field trip. You'll need about one litre per hour in really hot weather (above 35 °C).
- Drink water rather than carbonated sugary drinks, which don't quench your thirst.
- Drink water rather than alcohol, which will dehydrate you even more.
- If you become dehydrated, a quick fix is to drink any electrolyte-based sports drink, which has the essential ingredients to bring the body's electrolyte balance back to normal.

Bobby McAskill is a trained nurse and, like many Australians, has inherited fair skin and low tolerance for an Australian sun from generations of Scottish forebears.

4.3.11. A Serious Danger: Skin Cancer

The incidence of melanoma is increasing worldwide, due to a thinning of the ozone layer that allows more ultraviolet radiation to reach the earth's surface. The highest incidence of melanoma in the world is in Australia, where there is a "hole" in the ozone layer. In fact, Australia has melanoma incidence rates around four

TABLE 4.1. The ABCDs of melanoma

A	Asymmetry
B	Border irregularity
C	Color variation
D	Diameter over 6 mm
E	Evolving (enlarging, changing)

times higher than those found in Canada, the UK and the US (Cancer Council of Australia, 2005). While around one in seventy Caucasians worldwide are at risk of developing melanoma during their lifetime, for white-skinned Australians, the rate is around one in fifteen. Clearly, if you come to Australia, your chances of getting skin cancer dramatically increase.

The first thing you need to know about is solar ceratosis, which can be a pre-condition for skin cancer. If not treated, this can turn into full-blown skin cancer. There are three main types of skin cancer: basal cell carcinoma; squamous cell carcinoma; and malignant melanoma. Basal cell carcinoma is the most common form, and usually appears as small, fleshy bumps or nodules, found most often on the head, neck and hands, or as red patches on the trunk of the body. Although this type of cancer rarely spreads to other parts of the body, it can still cause considerable damage, and occasionally death. Squamous cell carcinomas are the next most common form of skin cancer. They are usually found on those parts of the body most relentlessly exposed to sun—on the face and tips of ears or around the mouth—and have the ability to metastasise (spread to other parts of the body). Malignant melanoma is the least common, but most deadly, form of skin cancer. It has a strong tendency to metastasise, so early recognition and treatment is particularly important in arresting this cancer. Melanomas are usually brown or black in color, but can be red, pink, skin color, or white. They are normally raised, but can be flat as well. Melanomas are insidious, as they grow so slowly you barely notice the changes in your skin. Any changing lesions should be treated with suspicion. Warning signs of melanoma include changes in the surface of a mole, oozing, bleeding or the appearance of a new bump, spreading of pigment from the border of a mole or scar tissue into surrounding skin, and any change in sensation including itchiness, tenderness or pain.

Melanoma Markers. Table 4.1 contains an ABCD of how to identify melanomas, developed by the New Zealand Dermatological Society (<http://dermnetnz.org/lesions/melanoma.html>).

You are in a high risk category for melanoma if you:

- Live in Australia or New Zealand.
- Work in an occupation (such as archaeology) where you may spend long periods of time in the sun.
- Have a Caucasian background. People of middle eastern, Asian or black heritage are less likely to get melanomas. However, having dark brown or black skin is no

guarantee. Dark-skinned people can develop melanoma, especially on the palms of the hand, soles of the feet, under the fingernails or toenails, or in the mouth.

- Have fair skin and freckles.
- Have red or blonde hair.
- Allow your skin to have excessive exposure to the sun.
- Have a history of sunburns, especially during childhood.
- Have lots of moles on your body (more than 50 puts you into a high risk category).
- Have a mole with an unusual or irregular shape (which could either be a precursor to melanoma or melanoma itself).
- Have scars, such as those from smallpox injections, which can act as entry points (melanoma begins on the surface of the skin).
- Are balding (more skin exposed to the sun).
- Are over 50 years of age.
- Have a family history of melanoma, particularly if two or more family members have been affected.
- Have had several basal cell or squamous cell cancers.

While melanomas are most likely to occur on exposed areas of skin, they also can appear on parts of the body rarely exposed to the sun. Anyone can develop melanoma, even if they have none of the risk markers listed above. However, people with one or more of these markers are in a high-risk category. For these people, regular skin examinations by a dermatologist could be life-saving.

Claire's Skin Cancer Story

I knew I was in a high-risk part of the world and that I was probably in a high-risk category for skin cancer (I have red hair). For several years, I planned to have a check-up, but didn't find the time. Since I did not expect to find anything it seemed like a bit of a waste of time and faintly neurotic (and hence un-Australian). Anyway, in July, 2004 I got a sunburn under my eye, which didn't seem to go away, and I had to hang around the Royal Darwin Hospital for another purpose, so I made an appointment to see the dermatologist. When I saw him, he dismissed the sunburn, but identified another mark on my arm as a possible form of skin cancer, which could be treated by a cream. He did a biopsy because I was about to leave to live in New York for a year, and I would have to continue the treatment there. When I went back to see him a month later, the conversation went something like this:

Doctor: You have a melanoma.

Claire: I have a melanoma?

Doctor: Yes. You have to have an operation as soon as possible.

Claire: I have to have an operation?

Doctor: Yes. I'll try and book you in for tomorrow.

Claire: Tomorrow? Hello? I can't have an operation tomorrow.

Doctor: Listen, this is serious. You could die.

Claire: I could die? I feel fine. I'm healthy. I'm not in pain . . . What do you mean?

Doctor: You have a melanoma. If we don't treat it immediately, you could die.

Claire (aside): What a nasty man. I don't like this doctor.

The reader will understand that I had the operation, didn't die, and developed a professional interest in melanomas and their prevention.

How to Protect Yourself from Skin Cancer. To protect yourself from skin cancer, take the following simple steps:

- Follow Bobby McAskill's tips for surviving the Australian sun.
- Protect your face from the sun, but don't overlook the rest of your body. The most common sites for melanoma are the lower legs for women, and the upper back for men.
- Make certain that you know the location and appearance of the moles on your body.
- Practice periodic self-examination in order to recognize any new or developing lesions.
- Schedule an annual examination by a dermatologist, especially if you are working in northern or central Australia.
- Remember that the most important step you can take to protect yourself from skin cancer is to have any changing mole or lesion examined by a dermatologist. If detected early, skin cancer has a 95% cure rate. The earlier a suspected skin cancer is reported, the more likely it is that the treatment will be successful.

4.3.12. *Driving on Australian Roads*

Australians drive on the left-hand side of the road, a legacy of our colonial heritage, and all vehicles are right-hand drive. Seat belts are compulsory, so not wearing a seatbelt will make you, or the driver of the car, liable to a fine. The laws concerning drinking and driving are enforced scrupulously, as are the laws concerning speed limits, unlike in some other places (e.g. the beltway around Washington, D.C., where you would likely be arrested for hazardous driving if you drove at the recommended speed of 55 miles per hour). If the speed limit states 60 km/hr, and you are caught driving at 70 km/hr, you will be fined. While speed limits differ slightly throughout the country, they are all governed by the same principles: drive slowly in residential areas, especially near schools; drive faster in built-up areas; and drive faster again when on freeways or in the country. The normal speed limits are:

- Residential areas and school zones—40/50 km/h.
- Built up areas—50/60 km/h.
- Freeways—100/110 km/h.
- Northern Territory (outside of residential areas)—No limit (Figure 4.3).



FIGURE 4.3. No limit sign, Northern Territory.

You can use an international driver's licence to drive in Australia. For more information concerning Australian driving permits, vehicle inspection, road tax, mandatory insurance and motor vehicle rental, go to the web site of the Australian Tourist Commission at <http://www.australia.com>.

In terms of driving cross-country, Australia is sparsely inhabited. Travelling long distances is commonplace (in Oz terms two places 100 km apart can still be considered “local”), although roads vary considerably in quality. You might have heard of the Australian “Outback” as if it was a well-defined place, but what it’s really referring to is about 80% of the Australian continent. You will never see a sign saying “Outback” but you’ll know it once you get there. Several changes take place in a short distance. For one thing, the road you (were) driving on will become about half as wide as before, it may become dirt, and there are likely to be wheel-rutted tracks veering off towards the horizon. There will rarely be any fences, which means that stock (sheep and cattle) are just as likely to be standing in the road as beside it, and signs of habitation become fewer. Take note of any road signs, particularly anything reading “Road Trains Permitted” or “Beware of Road Trains”. A road train is a semi-trailer (lorry) pulling at least one, if not two or more, semi-trailer length wagons behind it. In effect it is multiple semi-trailers joined together. Road trains are used to carry stock around Australia and travel the major highways, both sealed and unsealed. They are not particularly fast (45–50 mph, or 65–80 km), but they average around 160 feet (50 m) long, are as many tons in weight and typically have 42 wheels. Meeting one of these on a narrow, dusty country road can be quite frightening, especially if you underestimate their size or speed. If you do meet one there are two things to remember: pull over as far as you can (even get off the road if possible especially if the road is very narrow) to allow it to pass you safely; and keep in mind that it takes a lot longer to pass one—in both directions—than an ordinary truck. Don’t ever overtake one if you cannot see clearly a long way ahead of you.

Safe Driving

- Don’t assume that a road means habitation. Remote areas of Australia are full of roads (tracks mostly, but then so might be the “main” road you’re driving on) that lead to abandoned settlements or are the result of geological site surveys.
- Before travelling in remote areas notify local police or property owners of your proposed route.
- Check out the condition of dirt roads with locals. Road conditions can change dramatically according to recent weather.
- Twilight is a particularly hazardous time for driving, because animals come close to roads to graze on the greener grass along the road verge, so take care.
- If your vehicle breaks down: It is wisest to stay with it, rather than attempt to find help on foot. A vehicle is a much bigger object for a search team to locate and will offer you some protection from the elements.
- Cover as much of your body as possible with light coverings to reduce perspiration.
- Make a sunshade from a tarpaulin or blanket strung from the south side of the car. Stay in the shade as much as possible.
- Undertake strenuous jobs only at night. Rest to conserve your energy.

- Ration your water and food supplies. Make a shallow hole to rest them in under the car to keep them cool.
- Make a solar still before your water supplies run so low that you are worried.
- Identify the nearest high ground. Remove your car's rear-view vision mirror to use for signalling, and prepare appropriate air search signals.
- If you must leave the car, leave a note outlining your proposed route. Travel at night when it is cool, and mark your route clearly, so that you can be followed, or can find your way back easily.

Night driving in country Australia can be problematic. The simplest advice is don't, although there will probably be times when you cannot avoid it. The Australian outback is full of wildlife, both large and small, and it is often found close to the roadside, particularly in dry seasons when water run off makes the grass there tastier to eat. The chance of hitting some form of wildlife at night is extremely high. While it may not matter too much to hit a rabbit or a frog (except to the rabbit or the frog), if you hit a kangaroo, an emu, a wombat, or a cow it will in all likelihood be goodbye to your car (or a good proportion of it) and possibly also goodbye to you. This applies equally for the hour after sunrise and before sunset, because much Australian fauna is nocturnal. If an animal does happen to run or jump in front of your car, do not swerve, as this is a principal cause of accidents.

Fatigue is also an obvious problem, particularly given the distances that separate major Australian cities and towns. Have plenty of stops, and if you're driving in summer, remember that the heat can be extreme. Also be aware that service stations (gas stations) are sometimes few and far between outside capital cities and that a distance of hundreds of kilometers from one to the next is not unusual. Automatic Teller Machines are likewise limited to larger towns and cities, so don't assume that you'll be able to find one wherever you go, though you will be able to use a card to make most normal purchases (food, fuel, accommodation), even in remote communities.

4.4. Employment

4.4.1. *Entry Formalities*

A valid passport or similar certificate of identification is required of all people wishing to travel to and enter Australia. Everyone, except holders of Australian and New Zealand passports, requires a visa to enter Australia (New Zealand passport holders can apply for a visa upon arrival). Americans may enter with an Australian visa or, if eligible, through Electronic Travel Authority (ETA). This replaces a visa and allows a stay of up to three months. It can be obtained for a small fee at <http://www.eta.immi.gov.au>. Airlines and travel agents can also issue ETAs. More information about ETAs and other entry requirements can be obtained from the Embassy of Australia, 1601 Massachusetts Avenue, N.W., Washington, D.C.

20036, or via the Australian Embassy home page at <http://www.austemb.org>. For information on Australian visas requirements go to the web site of the Department of Immigration and Multicultural and Indigenous Affairs* (www.immi.gov.au). For the location of your nearest Australian consulate go to the Department of Foreign Affairs and Trade's* website (www.dfat.gov.au).

4.4.2. Working Holiday Maker

Australia has reciprocal Working Holiday Maker (WHM) arrangements with a number of other countries. This allows young people on holiday to earn cash through "incidental" employment, as long as they meet visa requirements. The word "incidental" is interpreted pretty broadly, and includes any kind of work of a temporary or casual nature. Currently, Australia has reciprocal WHM arrangements in effect with the UK, Canada, the Netherlands, the Republic of Ireland, Japan, the Republic of Korea, Malta, Germany, Sweden, Denmark, Norway, Finland, the Hong Kong Special Administrative Region of the People's Republic of China, the Republic of Cyprus, Italy, France, Belgium, Estonia and Taiwan. If you obtain a WHM visa, you can stay up to 12 months from the date of your initial entry into Australia, regardless of whether or not you spend the entire period in Australia.

To qualify for a WHM visa, you need to be aged between 18 and 30 and without dependent children. You must be visiting Australia primarily for a holiday and you must have a return ticket or sufficient funds to pay your return or onward fare, should the need arise, as well as sufficient money to cover the first part of your stay. The intention of this scheme is to allow you to work in Australia to fund a holiday, not to obtain semi-permanent employment, so you are not allowed to work with any single employer for more than three months. Remember, you must apply for a WHM visa outside Australia and before you turn 30. Information about the WHM scheme can be obtained from the website of Australia's Department of Immigration and Multicultural and Indigenous Affairs (DIMIA) (www.immi.gov.au).

4.4.3. Tax

If you're going to work legally in Australia, you should apply for a Tax File Number (TFN) to avoid being taxed in the highest tax bracket (about 48% in 2006). To do this, you'll have to visit an Australian Taxation Office* in Australia to go through the process of obtaining a TFN. Call 13 28 63 once in Australia to find what you'll need to take and where the closest tax office is. Some people work for cash in hand to avoid paying tax but remember that, if you're caught, you risk being deported and may be unable to return. It is possible to claim the cost of personal protective gear, such as sunglasses, hats and sunscreen, as tax deductions. The thinking here is that wearing sun protective clothing is no different from wearing safety boots, hard hats or gloves.

4.4.4. *Setting up a Bank Account*

For people planning to work in Australia, it is highly likely that you will have to set up an Australian bank account in order to get paid. Generally, you will have to open a bank account within the first six weeks of your arrival. All you need to open one is your Passport and Visa/entry stamp, although different banks may have slightly different rules. You can still open an account later than six weeks after arriving but if you do so you will have to complete the “Hundred Point Check”. This is standard practice to prove your identity and requires you to present sufficient items of identification with a rated value commensurate with their reliability (i.e. passports and birth certificates are the highest rated means of identification and therefore equal 70 points each) to a total of 100 points. It is worth checking with the bank of your choice to find out their particular requirements. There are four main banking institutions in Australia: the ANZ; the Commonwealth Bank; the National Australia Bank; and Westpac. You are best off getting an account with one of these bigger banks as they will have branches all over the country. Other than that, Citibank (www.citibank.com.au/) has recently expanded into Australia, though it has few branches. As it stands, it is more convenient (and more Australian) to bank with an Australian bank.

Gail Higginbottom’s Tips for Living and Working in Australia

Working

- The pay is usually better in Australia than in the UK for the same position and what you can buy for a pound, you can buy for a dollar in Australia (discounting Sydney and London as these don’t fit the Standard Norm curve). The rent in cities and suburbs in the UK is almost always much more, e.g. \$500 per month for a one bedroom tenement flat 15 min walk from Glasgow Uni and 40 min walk from city centre; versus \$680–720 for a two bedroom house in Adelaide with garden, 40 min walk from city centre. Melbourne is more expensive than the average, as is, oddly considering its size, Perth.
- For workers there is no council tax if you rent in Australia. Only the owners pay, which could save you hundreds of dollars per year. Not even the payroll tax in Australia takes away from this positive difference in saving.
- Try and get a bank account in Australia before you come over. It will save a lot of hassle. Make sure you bring over all your original documents if you are going to be staying for a while: including other passports, qualifications, birth certificates, birth registrations, and doctor’s letters for medication. If staying a short while, make copies and bring them, but make sure someone is in charge of the originals in your absence so that they can send them via emergency post if necessary.

- As soon as you have confirmation of your employment go to the Tax Office (ATO) to get your tax number (=National Insurance Number in the UK), otherwise you cannot get paid.
- If you're not an Australian citizen or resident, you will be taxed a lot in Australia—something on the order of 33.333%!!! However, be clever and contact ESS (European Student Services), who may well be able to claim some of that back for you when you return. They organise tax refunds for anyone who has paid income tax while working abroad in the US, Australia, the UK, Holland, Germany, or Ireland and they can provide you with a free refund estimation for the country you worked in. Their home page is <http://ess.ie>. They also operate under the name Taxback.com. This has been a well-kept secret, but I do know people who have been successful. ESS may even be able to get back your superannuation (money that the employer legally has to pay for you over and above your wage, but which is paid to a superannuation scheme rather than to you directly).
- Extending your stay is a bit of a ritual. If you have a job then your employer may be able to sort this out. You will need a letter from your employer stating:
 - That your job can be funded.
 - That the position was advertised, either internally or externally, depending on the position type and the visa required.
 Nevertheless, it is the Immigration Office that is your first port of call re visa extensions.
- Funding in academia is pretty miserable compared to the UK and quite short-term. The Australian government doesn't tend to invest in long term projects and Australia doesn't really have as many or as effective funding bodies outside of government.

General Advice for Living in Australia

- It's true. There is always a beach nearby if you are living in the capital cities.
- In the smaller cities the countryside is 20 min away, if that.
- There are wineries in most states, but particularly in New South Wales, South Australia, Victoria and Western Australia.
- Cities and towns are a long way apart in Australia and it costs a lot to get from A to B. Ways around it are the usual: take the bus or book plane flights in advance to get good offers. Naturally the bus will take a very long time, but if you get the chance try and break up your trip. Short local bus trips are usually much cheaper in the UK, but longer local trips (bus, train or tram) are cheaper in Australia.
- If you're using the bus to get around the city, make sure you buy a multi-trip ticket (paying for bus trips in advance) that you can use on any form of public transport.
- Be prepared for things not to make sense or not to be the way they are at home. Despite sharing a language and a cultural history somewhat as a society (if

not as individuals or groups), the cultural differences might be greater than you expect.

- Some people from the UK might find that the amount of personal space (physical and private) is not as great as they might like or be comfortable with at first.
- In Australia, people may invite you into their own homes to socialize, even if they don't know you well, so be prepared!! People socialize, or entertain, in their homes as much as outside.
- Shockingly, the pub isn't the centre of social life in Australia, except in smaller towns or perhaps communities within a city or suburb. Partially this is because Australians spend more time outside.
- Spitting in the street is not usually acceptable in Australia. It is considered rude and unhygienic.
- If you like café societies, then you'll like living in the city in NSW, Vic, SA and WA.

Gail Higginbottom is an Australian archaeologist who has worked extensively overseas. She is currently with the Glamorgan Gwent Archaeological Trust.

4.5. Systems and Standards

4.5.1. Australian Standards for Mapping and Navigation

Nearly every national mapping system uses its own datum, or one limited to a small region. As a result the standards used in Australia for mapping and navigation will differ from those used in other countries. The principal variation in navigational terms is the national mapping system and datum that are used to reference site locations in Australia. Until very recently most maps in Australia were based on the Australian Map Grid 84 (AMG84), a standard UTM projection derived from the Australian Geodetic Datum 84 (AGD84). Recent updates have produced the Map Grid of Australia 1994 (MGA94) system, which is derived from a new geocentric datum (the Geocentric Datum of Australia, or GDM) and its corresponding geographical coordinate system (the GDA94). The GDA/MGA system was introduced in January 2000 and supersedes the older mapping systems previously in use (the most common are the AMG84 and its precursor, the AMG66. As its name suggests, the AMG66 was based on an earlier geodetic datum, the Australian Geodetic Datum 66). Maritime charts are also being converted to the new GDA/MGA system. Whether you use the MGA/GDA or AMG/AGD system for grid referencing will essentially depend on:

- The age of the maps you are using (look at the legend at the bottom to see the date and whether or not it uses the AMG/AGD or MGA/GDA datum). If you're using older maps (generally, but not always, those produced before 2000), then MGA/GDA co-ordinates will be useless.

- Whether you are trying to relocate a site recorded using an older mapping system. Obviously grid references generated from an earlier mapping system will not be able to be located on a contemporary GDA map. The distance between map points plotted against the GDA as opposed to the AGD datum is around 200 m (<http://icsm.gov.au/icsm/gda>)—not an acceptable level of error in professional archaeological fieldwork.

A second level of local knowledge that is essential when mapping and navigating in Australia is the map projection system that we use here and how to construct an accurate grid reference from it. The Map Grid of Australia and the Australian Map Grid both use a UTM (Universal Transverse Mercator) projection to flatten the curved surface of the Earth onto the two-dimensional surface of a map. A UTM projection divides the earth into 60 zones and locates positions within each zone according to a system of eastings and northings (measured in meters) as opposed to latitude and longitude (measured in degrees, minutes and seconds). Australia covers 12 zones of the UTM system, from Zone 47 through to Zone 58. In the Northern Hemisphere, northings begin at zero at the equator and increase northward, while in the Southern Hemisphere, they begin at 10 million at the equator, and decrease southward to prevent negative numbers. All land-based grid references in Australia are calculated in eastings and northings, in contrast to marine-based grid references which are calculated in latitude and longitude. The Parks and Wildlife Division of the NSW Department of Environment and Conservation* (formerly the NSW National Parks and Wildlife Service), for example, will require you to use an 11-figure grid reference given in eastings and northings on all their standard site recording forms. To ensure you know how to read and write an accurate grid reference using eastings and northings, it is a good idea to buy the *Map Reading Guide: How to use topographic maps* published by Geoscience Australia (<http://www.ga.gov.au/>). Among other things, it is cheap (around \$3 Australian) and contains a useful pocket roamer for reading bearings, distances and grid references on 1:100,000 and 1:250,000 scale maps. You can also download the guide (minus roamer) for free from the Geoscience Australia web site (<http://www.ga.gov.au/download/publications.jsp>).

In contrast to maps, all Geographic Positioning Systems (GPS) use the WGS (World Geodetic System) 84 to plot their location. The new GDA system has been designed to be compatible with WGS84, so that their co-ordinates can be considered to be essentially the same (the difference is only around 10 cm, see www.icsm.gov.au/icsm/gda/wgs84fact.pdf). This means that if you are using an older GPS unit that does not support GDA94 then WGS84 will generate UTM co-ordinates that can be used perfectly adequately with a new GDA map (www.icsm.gov.au/icsm/gda/wgs84fact.pdf). When using a GPS in conjunction with published maps, the AGD/AMG systems will be most appropriate for older maps and the GDA/WGS84 for more recent maps. If you are having persistent problems in plotting your GPS readings, this is one of the first things to check. Whatever else you do, make sure that you note in your field book both the date of the map you are using and the datum that your GPS is referencing to avoid

confusion. Finally, when using a GPS in Australia, remember that most satellites orbit the equator, so hold the **unit** facing north so that your body interferes as little as possible with the satellite signal.

Mal Ridges' Practical GIS Tips

Australia has a patchy cover of Geographic Information System (GIS) data, but fortunately there are now some internet sites which are a great resource for putting together GIS data for a new study. At the GeoScience Australia webpage (<http://www.ga.gov.au>) national topographic GIS datasets at 1:250,000 scale can be downloaded for free. In addition, there is national coverage of scanned 1:250,000 geology maps that can be freely downloaded. Other free downloads from the website include 1988 and ca. 1750 vegetation, Aboriginal and Torres Strait Islander Commission (ATSIC) boundaries, 1993 land tenure, map sheet indexes, drainage basins, and a landsat mosaic (300 m resolution) of the whole country. For more detailed datasets of a particular region, look through the Australian Spatial Data Directory (<http://www.ga.gov.au/asdd/>), which is a searchable online database of spatial datasets throughout Australia.

Malcolm Ridges has a PhD in archaeology from the University of New England, and works with the Department of Environment and Conservation NSW in their GIS research and development group.

4.5.2. Time Zones

There are three time zones in Australia, running east to west. Eastern Standard Time (EST) operates in New South Wales, the Australian Capital Territory, Victoria, Tasmania and Queensland. Central Standard Time (CST) operates in South Australia and the Northern Territory, and Western Standard Time (WST) in Western Australia. CST is half an hour behind EST, while WST is two hours behind EST, at standard times.

Some Australian states and territories have a system of "daylight saving" which runs during the summer months. On a designated day in October (everyone but you will know which day) the clock is turned back one hour, giving an extra hour of sunlight. On a designated day in March the clock is turned forward, and "normal" time is resumed. In New South Wales, Victoria, the Australian Capital Territory, and South Australia daylight saving runs from the end of October through to the end of March. It runs from the beginning of October through to the end of March in Tasmania, whilst the Northern Territory, Western Australia and Queensland do not have daylight saving at all.

Table 4.2 shows the time in other parts of the world against that in the three time zones within Australia assessed on the basis of standard times. If you

TABLE 4.2. Converting time

Australia	Other parts of the world
Midday Friday, Sydney (EST) (GMT + 10)	6.00 pm Thursday, San Francisco 9.00 pm Thursday, New York
11.30 am Friday, Adelaide (CST) (GMT + 9:30)	2.00 am Friday, London 3.00 am Friday, Valencia
10.00 am Friday, Perth (WST) (GMT + 8)	4.00 am Friday, Cape Town 7.30 am Friday, New Delhi 11.00 am Friday, Osaka

need more precise details, use a web program (e.g. <http://www.journeymart.com/tools/Time.asp>). Remember, when converting times between Australia and other countries you will need to take into account the possible operation of daylight savings and time zones.

4.5.3. *Communications*

Australia has a vast and modern telecommunication network. Telephone, post, email and Internet services are available throughout the country. Mobile phones (cell phones in North American lingo) are available for rent. If you are on a short visit, you could contact your telecommunications carrier for activating international roaming but this is expensive. It is a better option to organize a local plan. Australia's mobile network operates on the 900 and 1800 bands for GSM and 800 for CDMA (which is being terminated soon). Internet access is readily available at hotels, hostels and libraries. As in other parts of the world, internet cafes have become increasingly popular in recent years. Australia uses RJ-45 telephone plugs and Telstra Exicom-610 six-pin plugs. Post offices are normally open 9.00 am to 5.00 pm Monday to Friday, although some post offices in metropolitan areas will also be open on Saturday mornings. Australia Post is normally reliable and has a range of postal options, including express services overseas.

4.5.4. *Electricity*

The electrical current in Australia is 220–240 V, AC 50 Hz. The Australian three-pin power outlet is different from those used in the UK, continental Europe, the USA or South Africa, so you are likely to need an adaptor. If your appliances are 110 V, you may need a voltage converter, though most modern laptop computers and printers have inbuilt conversion.

4.5.5. *Conversions*

Like people in Europe or Japan (and unlike people in the USA or Canada), Australia uses the metric system of measurement. This means that Australians measure distances by the kilometer, not the mile; weigh flour or sugar according to the

kilogram, rather than the pound; and measure temperature according to degrees Celsius, rather than degrees Fahrenheit. The metric system is easy to understand, as all the measurements are based on multiples of ten, but it can be confusing for people from those parts of the world that use the imperial (non-metric) system of measurement. To help you with this, Appendix 3 contains reference charts for converting between metric and non-metric systems.

4.6. Working in the Australian Bush

4.6.1. *Planning Your Field Kit*

In Australia much archaeological fieldwork takes place in the country (the “bush”), where sites are less likely to have been disturbed or destroyed by development. Archaeologists often travel in remote areas, on tracks, dirt roads and off-road. This can be highly dangerous, particularly if you are not prepared, or if you are not being sufficiently careful. Never go into the bush unprepared—archaeology is not worth dying for. As a first step, the obvious essentials that should form the basics of any fieldwork kit are:

- A pocket knife.
- Sunscreen.
- Insect repellent.
- A good hat and boots.
- A first aid kit.
- A water bottle.
- A compass.
- A map.

Other items to consider are lightweight, long-sleeved cotton shirts, which are not only sun-sensible, but, in fact, mandatory under Occupational Health and Safety Regulations if you are working on some active mine sites (particularly in Queensland and New South Wales). Similarly, in some industrial zones it is mandatory that you wear steel-capped boots. Other suggestions will depend on where you are working: in some inland areas you may find that a fly-veil worn over your hat will save your sanity, and in spinifex country thick jeans which protect your lower legs will be a godsend.

While sturdy boots are an essential, in some fieldwork situations (such as inside rockshelters) you may be asked to wear tennis shoes with fine tread because these are less likely to disturb the small artifacts and fine silty deposits which often build up in these places. At some rockshelter sites you may even be asked to work bare foot. If you do this, first check that this is not an area that has scorpions (called “coffin box” by Aboriginal people in parts of Arnhem Land, for reasons that are obvious).

4.6.2. *Responsible Behavior in the Bush*

Most advice for working in the bush is common sense. Make sure you take enough water, particularly if you are going to be surveying large areas and doing lots of physical activity (you should always aim to drink the equivalent of 8–10 glasses of water a day, particularly in an Australian summer). If you are going to a remote area, ensure that you have spare tyres for your vehicle, emergency food rations and some means of reliable communication (such as a UHF radio or satellite phone, *not* just a mobile phone). Make sure that you tell someone exactly where you are going and when you expect to return. Other responsible behavior includes:

- Don't walk onto or through private property without permission.
- Use a gas stove for cooking rather than dead wood, which is part of the natural ecosystem and can provide a home for animals.
- Minimize the use of soaps, shampoos and detergents. If you must use them, do so well away from streams or rivers.
- If toilets are not available, dig a small hole well away from any water source.
- Carry out everything you carry in, so that it can be recycled or disposed of properly.
- Leave bush surroundings alone as much as possible. Picking wildflowers reduces the chances of new plants, and is illegal in many national parks. Moving rocks can disturb animal habitats.
- Don't feed native animals, as this may cause them to become reliant on humans and unable to fend for themselves.
- If you're looking for somewhere to camp, check the area carefully for sites and artifacts first. There is nothing worse than waking up in the morning to find that you have pitched your tent and cooked your meals in the middle of an archaeological site.
- If you're making a campfire near an historical site, don't use any historical artifacts (e.g. bricks or stones from fallen structures) to make your fire.

4.6.3. *Finding Water*

If you find yourself stranded without much water, and without any obvious source of water, there are many places you can look in the bush to find it. Even apparently dry creek beds can contain water. If plants are growing, there has to be water somewhere beneath the surface. To find it, locate the lowest part of the creek bed and dig a hole in the sand, using a can or a mug. The hole need only be 10 cm across. Also, don't forget that your car has water in the radiator and in the reservoir for the windscreen washer (provided they do not contain additives). Also, you can wipe dew from rocks, leaves and your car before it has time to evaporate. Remember that sipping a little water occasionally is safer and more effective than taking large gulps at long intervals.

4.6.4. *Producing Water Using a Solar Still*

It is possible to produce up to two litres of water a day using a solar still (Figure 4.4). The only equipment you need is a sheet of plastic about two meters square and a mug or a can. Dig a hole about one meter across and 50 cm deep. Place the mug in the bottom of the hole and pack around it with green leaves. Stretch the plastic over the hole, making it secure by piling soil or large rocks around its perimeter. Place a stone on the plastic immediately above the mug. It is best to construct the still around sunrise and check it at midday. The still will have to be repacked with fresh leaves every day and you will need to construct at least one still per person.

4.6.5. *What Not to Do at a Site*

In the event of you finding a site anywhere in Australia there are some simple rules to follow. Most of the advice about what not to do at a site is not only good ethical practice, but also common sense.

- Don't interfere with the site in any way. Signing your name, chalking in engravings at art sites, or digging or collecting artifacts without permission are not only irresponsible but also illegal.
- Don't collect "souvenirs", even to verify to a State authority that you have found a site. There might be some exceptional circumstances in which you should collect material from a site—such as when it is at risk of imminent destruction—but this would be highly unusual.
- Don't leave rubbish behind—take it with you when you go.
- Don't make details of the site public without obtaining the proper permissions first. Indigenous people in particular may wish to protect sites by keeping their details secret.

Colin Pardoe's Top Twenty Tips for "Living it Up" Down Under

1. Learn to surf as soon as you arrive. Don't wait twenty-odd years.
2. If you are from the USA, remember to remind Australians that, as a matter of fact, you do own this country.
3. If you are from England, remember to remind Australians that, as a matter of fact, you used to own this country. Compare Australian culture unfavorably and use the most "toffee-nosed" accent you can (mimic the Queen if you are able). This makes them most excitable.
4. If you are from Japan, dyed hair and motorcycles are still the most favored fieldwork accessories.
5. If you are a biological anthropologist intending to work in the archaeological scene—burials and skeletons—don't use the verb "to undertake" (as in "undertake archaeological research").
6. If you are a proponent of culture history, get in touch with the ANU*.
7. If you are a proponent of post-processualism, get in touch with Flinders University*.

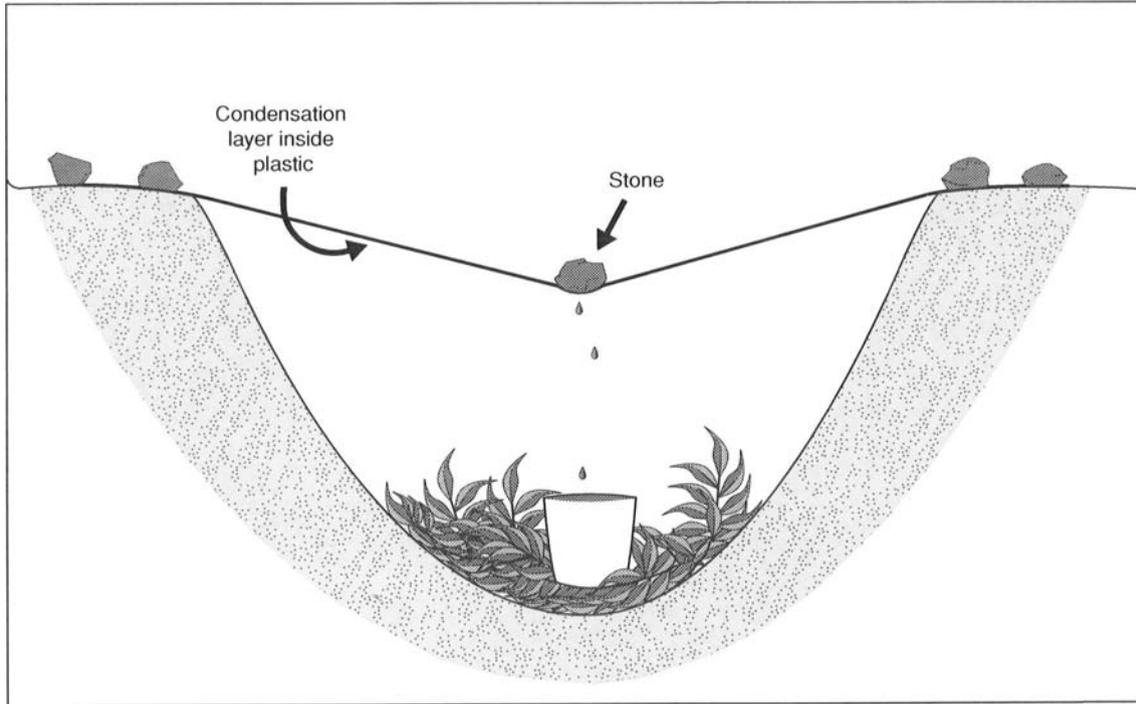


FIGURE 4.4. Making water using a solar still.

8. If you are a proponent of processualism, go anywhere you like and do any darned thing you like. Australia was made for processualism.
9. If you seek pre-understanding, see Bruno David.
10. Don't start with the biggest brim to a hat you can find. You will need to graduate to larger sizes as you gain experience and confidence (i.e. work less).
11. Put insect repellent under your blockout. When the flies bother you it's time to put on more blockout.
12. Don't put blockout or insect repellent above your eyes.
13. When going through airport security, there are a few simple rules to remember. Don't carry your trowel as carry-on luggage. Put all your techno-gear into one carry-on case [GPS, digicam, laptop, calipers - the more the merrier. I carry four sets plus bone board]. This provides maximum interest for the security guards scrutinizing the x-ray machine.
14. This is my serious contribution. When on the coast doing fieldwork, ignore the Australians who will regale you with white pointer mythology. Do as the surfers do and do not acknowledge the existence of sharks. Don't listen to those who would try to frighten you with various stories. I know, because I lived in South Australia where they don't frolic with dolphins, but with white pointers.
15. When inland doing fieldwork, don't be concerned about anything getting into your swag at night. But do leave it rolled up during the day. Check that your colleagues have not put anything into your swag, as this is a favorite pastime.
16. Do not unroll your swag in the dark without a good look around. The animal you should be most wary of in Australia is the ant. Do not unroll your swag in the dark on a bare patch of ground in a vegetated area. Use a light to see if there are any ant beds nearby.
17. Do not unroll your swag under a tree. Eucalyptus trees shed their branches with no warning, especially in hot weather. I have seen one skeleton of an Aboriginal person hit by an aptly named "widow-maker". Of all the skeletal remains I've examined on three continents, I've never seen a person so badly damaged and yet live.
18. When it's hot, drink lukewarm water or hot tea. Do not drink cold drinks, particularly those with 10 teaspoons of sugar. Get your sugar from beer after work.
19. When it's really, really hot, hang your beer from a tree in a wet sock to make it cold.
20. Drive consistently on the left hand side of the road.

Colin Pardoe's destiny lies in biological anthropology wrapped in an archaeological framework. He has the best job in the world as a sole trader doing what he loves most.

References and Further Reading

- Arthur, B. & Morphy, F. (Eds.) (2005a). *Macquarie atlas of Indigenous Australia. Culture and society through space and time*. Sydney: Macquarie Library Pty Ltd, Macquarie University.
- Arthur, B. & Morphy, F. (2005b). The environment and its use. In B. Arthur & F. Morphy (Eds.), *Macquarie atlas of Indigenous Australia. Culture and society through space and time* (pp. 26–37). Sydney: Macquarie Library Pty Ltd, Macquarie University.
- Blainey, G. (2001). Heroes and tall poppies. Boyer Lecture for Australian Broadcasting Commission's Radio National. Electronic document. <http://www.abc.net.au/rn/boyers/stories/s986927.htm>.
- Cancer Council of Australia (2005). The Cancer Council, Australia. <http://www.cancer.org.au/>.
- Department of Foreign Affairs and Trade (2005). A unique environment. <http://www.dfat.gov.au/aib/environment.html>.
- Lake, M. (1999). *Getting equal. The history of feminism in Australia*. Sydney: Allen and Unwin.
- Lilley, I. (2000). *Native Title and the transformation of archaeology in the postcolonial world*. Sydney: Oceania Publications, University of Sydney.
- Sawer, M. & Hindess, B. (Eds.) (2004). *Us and them: Anti-elitism in Australia*. Bentley: Australian Public Intellectual Network.
- Sport and Recreation Victoria (1997). *The business of sport: An examination of the dimensions of the sport and recreation industry in Victoria*. Melbourne: Sport and Recreation Victoria.
- Ward, R. (2003 [1958]). *The Australian legend*. Oxford: Oxford University Press.

Key Guides and Resources

- Australian Tourist Commission, www.australia.com, has useful travel and background information on Australia in ten languages. Accessible and easy to navigate, with a walking-talking home page.
- Cancer Council of Australia: www.cancer.org.au/. The home page for Australia's national non-government cancer control organization. Good advice on sun protection, including an online option to buy high quality sun protection products.
- Embassy of Australia: www.austemb.org. The homepage for the Embassy of Australia, Washington, D.C., includes recent Australian news, travel advice and information on visas.
- Geoscience Australia: www.ga.gov.au/about/corporate/ga_authors/publications_free.jsp. This page contains many mapping-related free publications, including "How to read topographic maps".
- Lonely Planet Publications (2000). *Lonely Planet Australia Road Atlas*. Hawthorn, Victoria: Lonely Planet Publications. Very helpful, whether you are travelling by car or public transport, as it has many useful features such as a locator map, legends, regional maps, and distance and climate charts.
- National Library of Australia: http://www.nla.gov.au/pathways/pthw_global.html. For a range of internet search engines and subject directories relevant to Australia.

New South Wales Health Department, www.health.nsw.gov.au, provides comprehensive coverage of useful information on Australian health issues, including a wide range of downloadable electronic publications.

New Zealand Dermatological Society, <http://dermnetnz.org>, has comprehensive coverage of skin cancer, including some graphic images of melanomas.

Smitz, P. (2005). *Lonely Planet Australia*. Hawthorn, Victoria: Lonely Planet Publications. The Australians' guide to travelling in Australia.

5

Working with the Legislation

All archaeology in Australia is governed by some form of cultural heritage regulation within three concentric regulatory frameworks: federal; state; and local government. Both federal and state levels involve various pieces of legislation that mandate how heritage sites and resources are to be protected under law. Local regulation typically takes the form of municipal planning schemes or other permit processes by town, city or shire councils that involve considering heritage places and items as components of development. These local or municipal planning schemes are still tied to State level legislative frameworks for planning development and protecting heritage sites.

The Commonwealth, or federal, level is obviously the largest scale for such decision making processes. Federal heritage legislation is closely allied to Commonwealth interests—in other words, to activities that take place on Commonwealth land, that are undertaken by Commonwealth agencies or that involve the movement of objects outside of Commonwealth controlled territory. For this reason, federal acts tend to have little direct impact on most archaeological projects. Some Commonwealth acts are not directly archaeological, but may still have a bearing on some archaeological projects. Native Title is perhaps the most important of these. In addition, all World Heritage Places in Australia, while gazetted under international law, are in practice protected by Commonwealth legislation.

Most day to day decision making about archaeological issues takes place at the state level, administered by separate government agencies in each state and territory. All state heritage legislation is broadly similar, in that it seeks to protect a similar range of places and objects from unauthorized damage. The precise definitions in each act vary widely, however, and will therefore have different implications for what is recognized to be a site or an artifact. In addition some state acts provide blanket protection for all sites, both known (i.e. those that have already been recorded and listed) and unknown sites (those that cannot be known until development or other work reveals them), while other acts will only cover known sites. This difference will obviously have repercussions for which situations will require a permit and when an archaeological investigation will be considered mandatory. How each state agency chooses to implement the practical aspects of their legislation is the other side to this coin. Some states are much stricter in

their requirements than others, choosing to regulate who can and cannot conduct archaeological work, how such work is to be reported and how artifact or archival collections are to be managed upon completion of a project. In general, each state government agency will regulate:

- What is and is not deemed to be a site.
- When you need permission to survey, excavate or otherwise work on a site and when you don't (note that in some states only some sites are protected under the legislation), usually under a formal permitting process.
- State-wide registers or lists of sites.
- What additional requirements are expected of you, such as the submission process for final reports and data, whether or not components complementary to the archaeological research are required, such as an interpretation plan for the site, and even down to the preferred format in which you should write your report and submit the data.

Sometimes other state government bodies will play a role in managing heritage sites and artifacts, although usually within a restricted purview. National Parks in South Australia, New South Wales, Tasmania and Queensland, for example, have their own legislation and systems for protecting sites on their properties. The Sydney Harbour Foreshore Authority* (in NSW) and the Port Arthur Historic Site Management Authority* (in Tasmania) are more restricted statutory bodies that govern properties under their management, although they themselves are still governed by the wider provisions of state heritage legislation. Other non-government, but state-based, bodies also play a role in protecting heritage in Australia and therefore are sometimes involved with archaeological fieldwork. The National Trust* has operated in Australia since the 1940s and is the most prominent of these. It is a community-based organization that has semi-autonomous branches in every state and territory. It maintains its own list of significant places, mainly historic but also including some natural and Indigenous places. Because it is non-statutory, the National Trust does not administer any legislation, but it does own and manage a significant number of Australian heritage properties (typically stately homes and other historically significant places), and cares for them under the auspices of the Burra Charter (see Chapter 9). The Historic Houses Trust of New South Wales* and the History Trust of South Australia* are similar non-statutory bodies that have a role in preserving and interpreting heritage sites.

Operating within the state level is the relatively small scale of local government decision making. Local city and shire councils exercise control over planning and development processes within their boundaries, although the extent to which this will incorporate heritage matters will vary from council to council. These councils are still bound by general state heritage legislation, but any protection offered to heritage sites at the local government level will usually be allied to town planning schemes and will be considered alongside other planning issues. Local government councils may maintain their own lists of locally important heritage places, both Aboriginal and European.

Some specialist organizations, such as the Royal Australian Institute of Architects and Engineers (RAIA), also maintain their own lists of important places. These are usually limited by their area of speciality—the RAIA list of over 1,000 places, for example, only includes aspects of the built environment, such as trees, buildings, gardens and bridges. Similarly the Department of Defence—a federal body—maintains its own list of defence heritage places, although this is a compilation of data drawn from the existing state and federal lists.

In general, it is both illegal and unethical to knowingly damage a heritage site. Any form of unsanctioned alteration, removal, addition or interference with the fabric of a site may be deemed damaging. Be aware that even ostensibly “useful” activities have the potential to cause damage, such as removing invasive vegetation overgrowth from an abandoned building (its removal may physically damage parts of the building), “tidying up” an historic site (what you perceive to be “old junk” may in fact be important archaeological artifacts), re-erecting a collapsed official sign in a rockshelter (this may damage the sub-surface archaeological deposits in the shelter), or cleaning graffiti from a rock art surface (this may remove traces of the art). Even though it may seem counter-intuitive, sometimes the apparent “messiness” or physical degeneration of a site is actually part of its significance. Even if it is not, *you must have permission from the relevant State authority before you interfere in any way with a heritage site.*

In the following sections we have only dealt with those federal and state acts that are applicable to the majority of archaeological field projects. For a complete listing of every relevant act, and active links to each one, see <http://www.heritage.gov.au/laws.html>. This site also maintains a complete listing of all government and non-government agencies with an interest in heritage, at <http://www.heritage.gov.au/govtagencies.html>.

5.1. Major Federal Legislation

At a national or federal level, heritage sites and material are protected by the *Environment and Heritage Legislation Amendment Act (No. 1) 2003*, the *Protection of Movable Cultural Heritage Act 1986*, and the *Historic Shipwrecks Act 1976* (Table 5.1). Aboriginal archaeological sites and material are also offered some protection under the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984*. Commonwealth acts usually only take precedence over state acts if there is conflict, or if a Commonwealth government agency is involved in developing or managing a site.

The Environment and Heritage Legislation Amendment Act (No. 1) 2003 added heritage protection to the provisions of the *Environment Protection and Biodiversity Conservation Act 1999*. *The Environmental Protection and Biodiversity*

Conservation Act, as its name suggests, is centered around biodiversity issues, with heritage being just one of seven matters of “National Environmental Significance” that can act as triggers for a development assessment. The provisions of the *EPBC Act* mainly control the actions of the Commonwealth (or its agencies and constitutional corporations) and people whose actions arise out of international or interstate trade. The *EPBC* and *EHLA Acts* therefore mainly regulate actions that are taken on Commonwealth land, that are likely to have an impact on Commonwealth land, or that are taken by the Australian federal Government or its agencies. In essence, this means that only archaeological projects which have some Commonwealth responsibility (i.e. which are carried out at the request of a federal agency, such as the Australian Heritage Council (AHC), or which are carried out on Commonwealth land, or which involve Nationally-listed heritage sites) will be governed by this act. Any such projects would require the approval of the Minister via a formal permitting process (see www.deh.gov.au/heritage for more information).

Although the Commonwealth has limited constitutional powers to protect heritage sites on private and State land, the provisions of the *EPBC Act* apply more widely to all Australians in relation to Indigenous heritage places (because the Commonwealth does have the power to legislate for matters involving Indigenous people), Commonwealth areas and Territories, and heritage matters that arise from ratified International Conventions, such as the World Heritage Convention.

The Australian Heritage Council Act 2003 established the Australian Heritage Council as the Commonwealth’s key advisory body responsible for the *EHLA Act*. Both the Act and the Council are administered by the Department of the Environment and Heritage (DEH)*. Through the Act DEH can protect sites on a number of lists, including the National Heritage List, the Commonwealth Heritage List and the Register of the National Estate. The National Heritage List records places deemed to be of value to the nation, whereas the Commonwealth Heritage List only includes sites that are owned or managed by the Commonwealth government or its agencies. Neither include sites that are deemed to be of state or local significance, responsibility for which rests with state or local government authorities respectively. Both lists include natural, Indigenous and historic sites, and may include overseas sites that are important to Australia, such as Anzac Cove in Turkey. The Australian Heritage Council also maintains an older list, the Register of the National Estate. First created in 1975, the Register was the original Commonwealth list for all items of significance. Eventually holding more than 13,000 places, it was deemed unwieldy and replaced in 2004 by the National and Commonwealth lists. Anyone can nominate a site to the National or Commonwealth Heritage Lists, although the thresholds for entry are different for each. A place can be included on both lists.

The Protection of Movable Cultural Heritage Act 1986 covers the import and export of objects of both foreign and Australian heritage significance and is part of Australia’s ratification of the 1970 *UNESCO Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property*. Under the provisions of the act, some items, such as sacred and secret Aboriginal and Torres Strait Islander ritual objects, rock art, human

TABLE 5.1. Commonwealth legislation and associated requirements

Legislation	Administering body	Indig. sites	Hist. sites	Requirements	Responsibilities
<i>Environment and Heritage Legislation Amendment Act (No. 1) 2003</i>	Heritage Division (Heritage Assessment Branch), Department of the Environment and Heritage	✓	✓	<ul style="list-style-type: none"> • Covers sites on the National Heritage List, the Commonwealth Heritage List and the Register of the National Estate. • Under the act all activities judged likely to have a significant impact on such sites must be referred to the council for comment. 	<ul style="list-style-type: none"> • Protection for Commonwealth Heritage Listed sites only applies to actions taken by the Australian Government and its agencies, and actions taken on Commonwealth land or which are likely to have an impact on Commonwealth land.
<i>Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Amended 1987)</i>	Heritage Division (Heritage Assessment Branch), Department of the Environment and Heritage	✓		<ul style="list-style-type: none"> • Can only be invoked by or on behalf of an Aboriginal or Torres Strait Islander Organisation. 	
<i>Historic Shipwrecks Act 1976 (Amended 1981)</i>	Heritage Division (Heritage Management Branch), Department of the Environment and Heritage through the individual state bodies		✓		<ul style="list-style-type: none"> • Protects all shipwrecks older than 75 years and their artifacts in Commonwealth waters from disturbance. • Cannot enter a protected zone without authorisation. • Must report historic shipwrecks or relics to the Federal Minister through the relevant state body (Heritage SA, Heritage Victoria, the NSW Heritage Office etc. see Table 5.2).

<i>Aboriginal Land Rights (Northern Territory) Act 1976</i>	Office of Indigenous Policy Coordination, Department of Families, Community Services and Indigenous Affairs, through NT Land Councils*	✓		<ul style="list-style-type: none"> • Only applies to the Northern Territory of Australia. • Non-Aboriginal people prohibited from entry onto Aboriginal lands without a permit.
<i>Protection of Movable Cultural Heritage Act 1986</i>	Heritage Division (Movable Cultural Heritage Unit, Heritage Assessment Branch), Department of the Environment and Heritage	✓	✓	<ul style="list-style-type: none"> • Will require a permit to export artifacts or objects designated as Class B (including items of Australian Aboriginal and Torres Strait Islander Heritage, archaeological items, and items of documentary heritage, coins, and items of “historical significance”). • Items in Class A (including sacred and secret ritual objects, bark and log coffins used as traditional burial objects, human remains, rock art and carved trees) cannot be exported under any circumstances.

remains and dendroglyphs (carved trees), may not be exported from Australia under any circumstances and others, including archaeological artifacts and heritage machinery, will require a permit. This act is administered by the Movable Cultural Heritage Unit in the Department of the Environment and Heritage in Canberra on behalf of the Minister for the Environment and Heritage.

The Historic Shipwrecks Act 1976 protects all historic shipwrecks and associated relics over 75 years old in Commonwealth waters, which is defined as extending from the low water mark to the edge of the continental shelf. This Act applies to all wrecks, whether they are known or not (for more information see Chapter 8). The *HS Act* provides for some wrecks to be protected by an exclusion zone, which means that you will need a permit to visit them. Other wrecks may also require permits if they are situated in a restricted area or are within a Marine Park with restricted access. The transfer, possession and custody of shipwreck relics, including coins, are also regulated through the *Historic Shipwrecks Act*, even if you came into possession of this material long before the Act itself existed. To find out about permits and protected zones, contact the Commonwealth Historic Shipwrecks Officer in the Department of Environment and Heritage, or the Commonwealth Minister's delegate in the relevant state or territory (for delegate contact details see Appendix 1, "Shipwreck Contacts", or <http://www.deh.gov.au/heritage/shipwrecks/contacts.html>). Each state and territory has complementary legislation that protects historic shipwrecks in their waters, including bays, harbors and rivers (for more information see "State Legislation", below). Anyone who finds the remains of a new ship, or an article associated with a ship, needs to notify the authorities as soon as possible.

The Aboriginal and Torres Strait Islander Heritage Protection Act 1984 is designed to protect and preserve Indigenous heritage areas and objects in Australia and Australian waters. It can only be invoked by or on behalf of Aboriginal or Torres Strait Islander groups. This act is most commonly invoked to protect traditional sacred sites, however it has also been used in some cases to protect historical archaeological sites. It, too, is administered by DEH on behalf of the Minister for the Environment.

The Aboriginal Land Rights (Northern Territory) Act 1976 is Commonwealth legislation protecting sites that are "sacred to Aboriginals or otherwise of significance according to Aboriginal tradition". It allows traditional Aboriginal owners to claim unalienated land in the Northern Territory and established the current system of Aboriginal Land Councils*, whose job is to represent Aboriginal people's views about how the land should be managed, protect the interests of traditional owners, negotiate on their behalf, and assist Aboriginal people in claiming land.

5.2. State Legislation

All states have separate legislation to deal with Aboriginal and historic heritage. This system is a legacy of older modes of thinking about Aboriginal people, who were often considered part of the natural rather than the cultural environment.

Apart from demonstrating the Eurocentric nature of heritage legislation (i.e. that built heritage can be understood as heritage in a different way to the natural places valued by Aboriginal people) it is also the reason that much Indigenous heritage legislation is still administered by various departments of natural resources.

Each state and territory tries to bring their heritage legislation into line with the standards in other states, although there is still considerable variation in how each act is administered and implemented. The similarities are probably most apparent in the various pieces of historic heritage legislation (i.e. those acts designed to protect historical archaeological sites, relics and places). Every state heritage act protecting historic resources throughout Australia has established an independent advisory body (usually referred to as a heritage council) and a state heritage register for listing significant sites. These heritage councils are independent of the government departments responsible for implementing the legislation, and act as advisory bodies to oversee the listing process and subsequent work at listed sites. As a result, most historic sites legislation tends to focus on listing sites rather than managing the archaeological search for sites. Because historic legislation is based on this premise (i.e. concentrating on known sites) the historic heritage legislation in some states only inadequately deals with archaeological issues. Many archaeological features, by their very nature, cannot be known about until development or some other potentially damaging activity reveals them and so cannot be protected by a “listings only” approach.

In terms of the process a person must go through in order to obtain approval for heritage work under any of these acts, every state is slightly different (Table 5.2). Most have a formal permitting process, although the details of what work this covers will vary (i.e. some states will only require it of actual development at a site, while others will require it of all archaeological survey work, even preliminary field surveys), as will the places that are required to have a permit in the first place (in some states only listed sites come under a permitting scheme and anything not listed has few, if any, legislative controls). In this respect, integrated planning processes are a relatively recent development that attempt to bring all development under a single application process, using local government as the submission point, and then referring particular issues on to the relevant state bodies where required. Obviously heritage will be only one aspect of development taken into account by these processes, and any heritage issues will still be governed by the relevant state heritage legislation. An integrated planning and heritage process currently operates in New South Wales, Queensland, Victoria, and South Australia.

There is a lot of state legislation relating to heritage matters. Because the precise requirements of legislation vary from state to state, it is imperative that you are aware of the relevant cultural heritage legislation and the requirements of the administering body in your state or territory *before* you begin fieldwork. The administering body and its staff is the first source you should look to for guidance.

TABLE 5.2. State and Territory legislation and associated requirements

State	Legislation	Administering body	Indig. sites	Hist. sites	Requirements	Responsibilities	Prerequisites for permits	Time limits on reporting, permitting and data submission
QLD	<i>Aboriginal Cultural Heritage Act 2003</i> <i>Torres Strait Islander Cultural Heritage Act 2003</i>	Cultural Heritage Coordination Unit, Department of Natural Resources and Mines	✓		<ul style="list-style-type: none"> • No formal permit system, but contact the Cultural Heritage Coordination Unit for more information. 	<ul style="list-style-type: none"> • N/A 	<ul style="list-style-type: none"> • N/A 	<ul style="list-style-type: none"> • No time limit on the completion of a cultural heritage study.
QLD	<i>The Queensland Heritage Act 1992–1995</i>	Cultural Heritage Unit, Environmental Protection Agency		✓	<ul style="list-style-type: none"> • Must apply through the EPA to the Queensland Heritage Council* for consent to develop a site on the Queensland Heritage Register. • Must apply to the EPA for permission to conduct an historical archaeological study, including survey, excavation and collection. 	<ul style="list-style-type: none"> • Must submit copies of final reports (from either survey or excavation/ collection) to the EPA. 	<ul style="list-style-type: none"> • Both application processes require a research design and must have written permission from the landowner. • Applications to conduct an historical archaeological study must include provisions for storage and conservation of artifacts upon completion. 	<ul style="list-style-type: none"> • Approvals for historical archaeological studies normally granted for 1 year only. • Must supply three copies of the final historical archaeological report (two bound originals for archiving and one unbound copy), together with completed Historical inventory notification forms and Deposition forms to the relevant Regional Cultural Heritage office within 40 business days after expiry of the approval.

TABLE 5.2. (Continued)

State	Legislation	Administering body	Indig. sites	Hist. sites	Requirements	Responsibilities	Prerequisites for permits	Time limits on reporting, permitting and data submission
NSW	<i>The Heritage Act 1977</i> (Amended 1991)	NSW Heritage Office		✓	<ul style="list-style-type: none"> • Must have a permit to excavate, collect or otherwise disturb a site. • Must apply to the Heritage Council for consent to carry out activities to an item listed on the State Heritage Register. 	<ul style="list-style-type: none"> • Must submit copies of final reports (from either survey or excavation/ collection) to the Heritage Office. • Summaries of the results of fieldwork required one (1) month after completion of fieldwork. Summary must provide basic information about results of fieldwork, until a Final Excavation Report is received. 	<ul style="list-style-type: none"> • Must include a research design. • Must include an up-to-date CV. • Must have written permission from the landowner. 	<ul style="list-style-type: none"> • Excavation permits valid for 5 years from date of issue. • Summaries of fieldwork required within one month of completion of fieldwork. • Final reports must be submitted within 12 months of issue of permit.
NSW	<i>National Parks and Wildlife Act 1974</i>	Cultural Heritage Division (CHD), Department of Environment and Conservation	✓	✓ (on DEC land only)	<ul style="list-style-type: none"> • Must have a section 90 ('Consent to Destroy') permit to excavate, collect or otherwise damage or disturb a site. • Must have a section 87 permit to carry out preliminary research, excavation, collection, or rock art recording. 	<ul style="list-style-type: none"> • Must submit completed recording forms for any new sites you find to the CHD. • Must submit copies of final reports (from survey, excavation or collection) to the CHD. • The format of reports should conform to the NPWS Standards Manual. 	<ul style="list-style-type: none"> • Must include a research design. • Must include an up-to-date CV. • Must have written permission from the relevant Aboriginal group(s). 	<ul style="list-style-type: none"> • DEC has delegation from the NSW Heritage Office to approve their own historic permits for work on historic sites on DEC land. These permits are valid for 3 years from the date of approval.

(Cont.)

TABLE 5.2. (Continued)

State	Legislation	Administering body	Indig. sites	Hist. sites	Requirements	Responsibilities	Prerequisites for permits	Time limits on reporting, permitting and data submission
ACT	<i>Heritage Act 2004</i>	Heritage Unit, Environment ACT*	✓	✓	<ul style="list-style-type: none"> • Must have a Development Application permit to excavate, collect or otherwise disturb a site on the Heritage Register. 	<ul style="list-style-type: none"> • Must submit completed recording forms for any new sites you find to the Heritage Unit. • Must submit copies of final reports (from either survey or excavation/ collection) to the Heritage Council. • If an Aboriginal site is declared restricted, it becomes an offence to knowingly publish without approval any restricted information about the place or object. 	<ul style="list-style-type: none"> • Development Applications (DAs) must include provisions for mitigating impacts to registered Heritage places and objects in the form of a Heritage Management Plan. If a DA does not have an attached heritage plan, the Heritage Council may add conditions to the approval of the DA which will stipulate what heritage management actions are required. • If a Heritage Mitigation Plan for follow-up heritage works is required, the archaeologist will need to develop the plan (research proposal and methodology) and undertake consultation with the relevant Aboriginal organizations, prior to submission to the Heritage Council for their endorsement. 	<ul style="list-style-type: none"> • Must report discovery of an Aboriginal place and/or object in writing and within 5 working days to the Heritage Council (not applicable to people with traditional Aboriginal affiliation with the land where the place or object was discovered). • DA approvals are granted by the ACT Planning & Land Authority and are valid for 12 months. • Site recording forms can be submitted to the Heritage Unit within 2 weeks of the submission of the final report to the client, (although site recording forms are not strictly necessary as long as the full recordings are detailed in a cultural heritage survey report). • Submission of final reports required within 60 days following completion of fieldwork.

TABLE 5.2. (Continued)

State	Legislation	Administering body	Indig. sites	Hist. sites	Requirements	Responsibilities	Prerequisites for permits	Time limits on reporting, permitting and data submission
VICT	<i>Heritage Act 1995</i>	Heritage Victoria		✓	<ul style="list-style-type: none"> • Must apply through Heritage Victoria to the Heritage Council of Victoria for consent to develop a site on the Victorian Heritage Register. • Must have a permit to excavation, collect or otherwise disturb a site for archaeological purposes. • Anyone undertaking historical archaeological surveys in Victoria is required to complete a form notifying Heritage Victoria. 	<ul style="list-style-type: none"> • Must submit completed recording forms for any new sites you find to Heritage Victoria. • Must submit two copies of final reports (from either survey or excavation/collection) to Heritage Victoria. 	<ul style="list-style-type: none"> • Heritage permits must include a full Heritage Impact Assessment Statement. • Archaeological permits must include details of remediation, including mechanisms for backfilling trenches upon completion of work. • Both permits must include a research design, including plans for conservation of artifacts. 	<ul style="list-style-type: none"> • Must submit copies of final reports (from either survey or excavation/ collection) to Heritage Victoria within 3-6 months of completion.

(Cont.)

TABLE 5.2. (Continued)

State	Legislation	Administering body	Indig. sites	Hist. sites	Requirements	Responsibilities	Prerequisites for permits	Time limits on reporting, permitting and data submission
VICT	<i>Aboriginal Heritage Act 2006</i>	Heritage Services Branch, Aboriginal Affairs Victoria (AAV), Department of Natural Resources and Environment	✓	✓	<ul style="list-style-type: none"> • Must have a permit to excavate, collect or otherwise disturb a site. • Must notify AAV through completing a Form D (notification of intent to carry out a survey) prior to undertaking an archaeological survey for Aboriginal heritage sites. • Must include an Archaeological Survey Attributes form as an appendix to any survey report. 	<ul style="list-style-type: none"> • Must submit completed record cards for any new sites you find to AAV. • If you don't find any sites, you must still notify AAV of this in writing. • Must submit copies of final reports (from either survey or excavation/collection) to AAV. • Must consult fully with the relevant Registered Aboriginal Parties. • All ACHMPs must meet a minimum standard. 	<ul style="list-style-type: none"> • Must include a research design, including plans for conservation and storage of artefacts upon completion of work. 	<ul style="list-style-type: none"> • Must submit an interim report of the results of the excavation within 6 months of completion of the excavation or expiry of the permit (whichever is the earlier) to AAV. • Must submit two copies (one bound, one unbound) of the final report resulting from any archaeological project in Victoria to the Heritage Registrar, AAV. • Must submit to AAV copies of all excavation notes, plans, section drawings and photographs as an archival record in the event that the originals are lost or destroyed within 6 months of completion of the excavation or expiry of the permit (whichever is the earlier). • Copies of all work based on the results of the excavation for which the permit was issued should be submitted to AAV for lodgement in its archive/library.

TABLE 5.2. (Continued)

State	Legislation	Administering body	Indig. sites	Hist. sites	Requirements	Responsibilities	Prerequisites for permits	Time limits on reporting, permitting and data submission
TAS	<i>Aboriginal Relics Act 1975</i>	Aboriginal Heritage Office, Department of Tourism, Parks, Heritage and the Arts	✓		<ul style="list-style-type: none"> • Must have a permit to excavate, collect or otherwise disturb a site. • Must have a permit or authority to excavate in search of sites or relics on Crown Land, public reserves or other reserved land. 	<ul style="list-style-type: none"> • Must report the discovery of any site to the Aboriginal Heritage Office. • Must submit copies of final reports to the Aboriginal Heritage Office. 		
TAS	<i>Historic Cultural Heritage Act 1995</i>	Heritage Tasmania, Department of Tourism, Parks, Heritage and the Arts		✓	<ul style="list-style-type: none"> • Must apply to the Tasmanian Heritage Council for a permit to carry out any works in relation to a registered place or place within a heritage area. 	<ul style="list-style-type: none"> • Must report the discovery of any site to Heritage Tasmania. 		
SA	<i>Aboriginal Heritage Act 1988</i>	Department of Aboriginal Affairs and Reconciliation (DAARE)	✓		<ul style="list-style-type: none"> • Must have a permit to excavate, collect or otherwise disturb a site. 	<ul style="list-style-type: none"> • Must report the discovery of any site to DAARE. • Must submit copies of final reports (from either survey or excavation/collection) to DAARE. 		

(Cont.)

TABLE 5.2. (Continued)

State	Legislation	Administering body	Indig. sites	Hist. sites	Requirements	Responsibilities	Prerequisites for permits	Time limits on reporting, permitting and data submission
SA	<i>Heritage Places Act 1993</i>	Heritage Branch, Department for Environment and Heritage		✓	<ul style="list-style-type: none"> • Must apply to the Heritage Branch for works that will impact a site listed on the South Australian Heritage Register. • This includes obtaining a permit to excavate if the place is listed on the Register. • Must obtain a permit to excavate in search of artifacts of heritage significance, or for any purpose where artifacts of heritage significance are reasonably expected to exist. 	<ul style="list-style-type: none"> • Must submit copies of final reports (from either survey or excavation/ collection) to Heritage SA. 		
SA	<i>Development Act 1993</i>	Planning SA		✓	<ul style="list-style-type: none"> • Must submit an application to the Planning SA for all works that will materially affect a listed heritage place, area or its context. 	<ul style="list-style-type: none"> • Includes any activities affecting listed Heritage Places or areas, including any work conducted under Mining Acts. 		
SA	<i>State Historic Shipwrecks Act 1981</i>	Heritage Branch, Department for Environment and Heritage		✓	<ul style="list-style-type: none"> • Must obtain a permit to interfere with a shipwreck or to remove a relic from a shipwreck. 	<ul style="list-style-type: none"> • Must report the discovery of any new shipwreck or articles associated with a shipwreck to Heritage SA. 		

TABLE 5.2. (Continued)

State	Legislation	Administering body	Indig. sites	Hist. sites	Requirements	Responsibilities	Prerequisites for permits	Time limits on reporting, permitting and data submission
WA	<i>Heritage of Western Australia Act 1990</i>	Heritage Council of Western Australia		✓	<ul style="list-style-type: none"> • Must apply to the Heritage Council of Western Australia to develop a site on the Register of Historic Places. 			
WA	<i>The Aboriginal Heritage Act 1972</i>	Heritage and Culture Division, Department of Indigenous Affairs (DIA)*	✓		<ul style="list-style-type: none"> • Must have a permit to excavate, collect or otherwise disturb a site. 	<ul style="list-style-type: none"> • Must submit completed site recording forms to the DIA • Must submit copies of final reports (from either survey or excavation/collection) to the DIA. • Must arrange storage and future management of all Aboriginal cultural material recovered in accordance with the wishes of the Aboriginal people. 	<ul style="list-style-type: none"> • Must have written permission from the relevant Aboriginal group(s) and an indication of their views on the project. • Must include a research design. • Must include an up-to-date CV. 	<ul style="list-style-type: none"> • Must provide the DIA and relevant Aboriginal communities/ people with: <ul style="list-style-type: none"> ◦ interim reports of the project at the end of each calendar year. ◦ a final report within 12 months of the expiration of the permit, and, ◦ any subsequent documentation and published reports (e.g. thesis, carbon dates, articles).
WA	<i>Maritime Archaeology Act 1973</i>	Western Australian Maritime Museum		✓		<ul style="list-style-type: none"> • Must notify the Director of the Museum in writing of the location of any new wreck site (that was, or appears likely to have been lost, wrecked, abandoned, or stranded, on or off the coast of WA before 1900) or any relic from such a wreck. 		

(Cont.)

TABLE 5.2. (Continued)

State	Legislation	Administering body	Indig. sites	Hist. sites	Requirements	Responsibilities	Prerequisites for permits	Time limits on reporting, permitting and data submission
NT	<i>Heritage Conservation Act 1991</i>	Heritage Conservation Services, Department of Natural Resources, Environment and the Arts	✓	✓	<ul style="list-style-type: none"> • Must have a permit to excavate, collect or otherwise disturb a site. 	<ul style="list-style-type: none"> • Covers historic, Indigenous and Macassan archaeological sites. • Must report the discovery of any site to Heritage Conservation Services. 		
NT	<i>Sacred Sites Act 1989</i>	Aboriginal Areas Protection Authority	✓		<ul style="list-style-type: none"> • Must have an Authority Certificate if fieldwork is being conducted on a sacred site. 	<ul style="list-style-type: none"> • Can apply for an Authority Certificate from the AAPA before conducting fieldwork in case any sacred sites are located. 		

At the time of going to press the *Queensland Heritage Act 1992*, Tasmania's *Aboriginal Relics Act 1975*, the *Tasmanian Historic Cultural Heritage Act 1995*, and the Northern Territory *Heritage Conservation Act 1991* were all under review.

5.2.1. Queensland (Qld)

Admirably, the recently instituted *Aboriginal Cultural Heritage Act 2003* and *Torres Strait Islander Heritage Act 2003*—the two key pieces of legislation protecting Indigenous sites in Queensland—recognize that the protection and conservation of such places should be based on respect for Aboriginal cultural and traditional practices. This means that only Aboriginal people can be the primary guardians, keepers and holders of this knowledge. Unfortunately there is no formal permitting process to accompany this legislation, so the precise means by which it protects such places and artifacts is unclear. Under both acts a person has a “duty of care” to protect Indigenous heritage and must take all reasonable and practical measures to avoid harming it. Guidelines setting out reasonable and practical measures for meeting the duty of care requirements established by the *ACH Act 2003* (Qld) are available from the Department of Natural Resources and Mines* website (http://www.nrm.qld.gov.au/cultural_heritage/legislation/duty_of_care.html). The *ACH Act* and the *TSIH Act* are both administered by the Cultural Heritage Co-ordination Unit, Department of Natural Resources and Mines.

In part these acts expressly recognize that the views of the Aboriginal Party for an area are key in assessing and managing any activity that is likely to harm Aboriginal cultural heritage. Under the legislation, an Aboriginal Party is defined as a Registered Native Title Holder or Claimant, including cases where a claim to native title has failed or where native title has been extinguished. In the absence of a Native Title Party, the Aboriginal Party is the person recognized in accordance with tradition or law as having responsibility for that place or object. This means that cultural heritage significance can only be assessed by the Aboriginal Party, and not by a non-Indigenous consultant, although registering such significance occurs by completing a Cultural Heritage Study approved under the Act that is usually, but not necessarily, submitted by a consultant. There is no time limit on completing such a study.

The recent changes to create this system of legislation for Aboriginal heritage in Queensland have had several repercussions for the way archaeology is conducted. The new Queensland system operates much more like Native Title, in that it requires not just consultation with some of the most obvious Aboriginal groups, but consultation with *all* related Aboriginal groups. This includes individuals as well as formally organized groups and the onus is on the consultant to identify the relevant people. Sometimes consultants will advertise in the local newspaper for relevant people to comment or attend a meeting and also to be involved in fieldwork. Similar changes in the implementation of the legislation in New South Wales seem also to be moving in this direction, although New South Wales appears

to be waiting to see how the system works in practice in Queensland before they embark on such a comprehensive change.

Historic heritage in Queensland is protected under the *Queensland Heritage Act 1992*, administered by the Cultural Heritage Unit of the Environmental Protection Authority*. In Queensland a heritage site is defined as any structure or object that is at least 30 years old. The provisions of the *Queensland Heritage Act* mainly govern the development of properties already listed on the Queensland Heritage Register, for which there is a formal permitting process to approve any changes or alterations. The assessment of development at privately owned heritage-registered places is now incorporated into the Integrated Development Assessment System (IDAS), which seeks to bring the various sources for development approval under a single application and referral process.

Part 7 of the *QH Act*, however, also provides for the identification, assessment and management of historical archaeological objects and historical archaeological areas of cultural heritage significance. A person who proposes to undertake an historical archaeological study must provide certain information about the study to the Environmental Protection Agency (EPA) in order to obtain an approval to carry it out. The reason for undertaking such a study may be generated by a research interest, as part of an environmental impact statement required under the provisions of the *Integrated Planning Act 1997* prior to the development of an area, for management purposes, or for other reasons. An historical archaeological study includes all surveys, excavations and collections relating to historical archaeological places in Queensland.

Sean Ulm's and Ian Lilley's Guide to Doing Archaeology in Queensland

- *Sources of Information.* Historical sites on the Queensland Heritage Register can be searched online at:
http://www.epa.qld.gov.au/cultural_heritage/registers_and_inventories.
Indigenous sites on the Aboriginal and Torres Strait Islander Cultural Heritage Database or Register can be searched by lodging a search request form available at: http://www.nrm.qld.gov.au/cultural_heritage/search_request/search_request_forms.html.
- *Artifacts.* The Queensland Museum* is the State repository but lack of space is affecting its ability to fulfil this legislative requirement. The new Acts allow Indigenous owners to keep skeletal material and secret/sacred items, while all other material remains the property of the State.
- *Human skeletal material.* Must be reported to the police in the first instance.
- *Climate.* The Far North has a tropical wet/dry climate, hot and dry but comfortable from May to September and hot, dry but humid until December. Inland areas can experience extreme heat during the day in summer and extreme cold at night in winter. The southeast has cool, dry winters, and hot, wet summers, while autumn and spring are perfect. Queensland has Australia's most variable climate, so do not rely on the weather being consistent from one year to the next.

- *Access.* Most of the State is accessible by road and air, or, in the Torres Strait and other island regions, boat and air. Rain can restrict access in the inland and the north owing to flooding or, especially in black soil areas, impassable boggy conditions. In the Torres Strait, rain can close grass airstrips (though most have been sealed recently) and bad weather (including wind) can stop boat and air travel altogether. Entry to Aboriginal and Torres Strait Islander communities requires permission from local Indigenous councils. Entry to private land requires the landowner's permission as well as permission from the traditional/customary owner if a different person.
- *Distance.* Rural and especially remote areas are called "rural and remote" for good reason. Make sure you have tested communications and recovery gear and procedures, and adequate water and first-aid supplies, and ensure that you are trained in map-reading and first-aid, as well as 4WD driving, recovery and basic repairs.
- *Maps.* There are 1:250,000 and 1:100,000 topographic maps available for the whole state and maps at 1:50,000 and better for selected areas. There is also good aerial photo coverage, especially of the coast by the Beach Protection Authority.

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5.2.2. New South Wales (NSW)

New South Wales and Victoria have the tightest and most integrated provisions for protecting cultural heritage and both provide blanket protection to Aboriginal and historical archaeological sites.

Aboriginal heritage in NSW is protected under the *National Parks and Wildlife Act 1974*, which is administered by the Cultural Heritage Division of the Department of Environment and Conservation* (DEC). The *NPW Act* protects all Aboriginal objects and places in the state, irrespective of whether they are already known or not. As part of its responsibilities, DEC also maintains two site registers: the Aboriginal Heritage Information Management System (AHIMS), a database of all Aboriginal objects and places in NSW, and the Historic Heritage Information Management System (HHIMS), a register of historic and contact items managed by DEC, most of which are located in national parks and reserves. The Cultural Heritage Division of DEC has very clear guidelines for the contents and formats of archaeological consultancy reports (both survey and excavation) for Aboriginal sites which must be followed (see Byrne, 1997; also Chapter 10 "Documentation and Publication").

The NSW Heritage Act 1977 (amended 1998) protects the State's historic heritage and, like the *NPW Act*, contains measures to protect archaeological resources at both known and unknown sites. The *NSWH Act* is administered by the NSW Heritage Office*. In NSW a site must be over 50 years old in order to qualify as

“heritage”. Under the Act, if you are excavating land in NSW and know, or even think, that you might disturb a relic, then you need to get an excavation permit issued by the Heritage Council of NSW*. Excavation Permits for relics from sites on the State Heritage Register are called Section 60 Permits. Permits for all other sites are called Section 140 Excavation Permits. *The NSW Heritage Act* requires that a person who has discovered a relic must notify the Heritage Council of the discovery within a reasonable time.

The NSW Heritage Office manages a register of all places of State significance, known as the State Heritage Register. This system contains a wide variety of sites, and includes both Aboriginal and historic places and objects. A second, broader list, the State Heritage Inventory, lists items of both State and local heritage significance. The NSW Heritage Office is also the agency responsible for administering the historic shipwreck and relics provisions of the *NSW Heritage Act 1977*. The Director of the Heritage Office is also responsible, under delegation, for the day-to-day administration of the Commonwealth *Historic Shipwrecks Act 1976*.

In 2005 amendments to the *Environmental Planning & Assessment Act 1979* were introduced to bring in a single assessment and approval system for all development within the State. Section 90 of the *EPA Act* lists impacts which must be considered before development approval is granted; heritage, including Aboriginal heritage, is one of these possible impacts. Similar to the Integrated Planning system in Queensland, applications under the *EPA Act* are lodged with local councils and then referred to the Heritage Council Approvals Committee for assessment and advice through the medium of the Heritage Office. *The Environmental Planning and Assessment Act* is administered by Planning NSW and local councils.

In NSW the Land and Environment Court is the arbiter for all disputes arising from the application of planning legislation and instruments in the state, including those relating to heritage matters. Although conciliation and mediation are often used in preference to formal court proceedings, archaeologists regularly appear in the Land and Environment Court as expert witnesses on heritage matters. Be aware that your field notes and recording forms can constitute legal evidence in any such proceedings, so always complete them as thoroughly and accurately as possible.

Jo McDonald’s Guide to Doing Archaeology in New South Wales

- *Sources of Information.* Historical sites are managed by the NSW Heritage Office and the NSW State Heritage Register can be searched and registered online at: <http://www.heritage.nsw.gov.au>. Indigenous sites are managed by the Department of Environment and Conservation (DEC) and the Aboriginal Heritage Information Management System (AHIMS) can be searched by lodging a search request with: <http://www.nationalparks.nsw.gov.au/npws.nsf/Content/Heritage+registers>. DEC maintains a database and recording cards for all Aboriginal objects, Aboriginal places and other Aboriginal heritage values in NSW that have been reported to DEC. This includes a database index of archaeological reports and a library of these reports.

- *Artifacts.* The Australian Museum* is the State repository for Aboriginal objects but lack of space is affecting its ability to fulfil this legislative requirement. Indigenous owners can apply for a Care and Control Permit to hold Aboriginal objects, although material remains the property of the State.
- *Human skeletal material.* Must be reported to the police in the first instance. The Coroner will decide if human skeletal remains are a police matter, and will liaise with DEC and the Aboriginal community when it is clear that the remains are not the result of a recent crime. Clearly Indigenous remains should be reported to DEC, the Police and the Aboriginal community—and excavation of these will usually only occur if they are threatened by development. Aboriginal communities will often wish to rebury Aboriginal remains once they have been salvaged and analyzed.
- *Climate.* New South Wales is a state of many climatic conditions—from temperate on the coast, to semi-arid in its far west, to alpine in the southern highlands. The far west can experience extreme heat during the day in summer (30–46°C) and extreme cold at night in winter. Minimum temperatures in the Alps can be as low as –15°C. The coast generally has cool, dry winters, and very warm and often wet summers. Much of the rainfall in the State occurs in early and late summer. Average State annual rainfall is 566 mm. (<http://www.bom.gov.au>).
- *Access.* Most of the State is accessible by road or air. Entry to private land requires the landowner's permission. To excavate any Indigenous site requires an s87 or s90 permit from DEC as well as permission from the Local Aboriginal Land Council, traditional owner or other relevant Aboriginal community. An s87 permit is also required to record (other than photograph) rock art. To excavate in National Parks requires additional research-oriented permits. Excavation of historic sites requires an s60 Permit from the Heritage Office.
- *Preparation and safety.* Rural and remote areas require tested communications and recovery gear and procedures, adequate water and first-aid supplies. You must ensure that you are trained in map-reading and first-aid, and have experience in 4WD driving and basic repairs. On the east coast rugged and inhospitable terrain may be encountered in National Parks and Wilderness Areas. Archaeological excavations in NSW are covered by State Occupation Health and Safety legislation and you will need certification through a Workcover Authority Accredited course (a “Green Card”).
- *Maps.* There are 1:250,000 and 1:100,000 topographic maps available for the whole state and maps at 1:25,000 for most of the eastern coastal areas. There is also good aerial photo coverage, and see Google Earth (<http://earth.google.com>).

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5.2.3. *The Australian Capital Territory (ACT)*

The Land (Planning and Environment) Act 1991 created a Heritage Places Register, which includes all types of heritage sites, and established the ACT Heritage Council* (note that this is a different body to the Australian Heritage Council) as the key advisory body on heritage issues in the ACT. Under this act, heritage was taken to encompass natural or manufactured (including Aboriginal) objects and places of heritage significance. The *L(PE) Act* was recently replaced by the *Heritage Act 2004*, which consolidates earlier heritage provisions and integrates heritage more closely into the development assessment process. It is administered by the Heritage Unit, Environment ACT. The *Heritage Act* covers both Aboriginal and historical sites, although protection for historical sites is limited to those formally listed on the Heritage Register. Aboriginal sites are slightly better protected, as the *Heritage Act* requires the reporting of unregistered Aboriginal places and objects. As in Queensland, the ACT requires you to contact the relevant Indigenous organization prior to the disturbance of any site, irrespective of whether it is Indigenous or historical. Although there is no blanket protection for historical places, there is still an ethical responsibility to report new historical sites to the ACT Heritage Council.

Lynley Wallis', Sam McKay's and Ed Clarke's Guide to Doing Archaeology in the Australian Capital Territory

- *Sources of Information.* A summary of all historical places, Aboriginal places and heritage objects on the ACT Heritage Register (as well as the individual register entries) can be searched online at: <http://www.environment.act.gov.au/heritage/actheritageregister>. Alternatively, copies of register entries can be obtained through the ACT Government Heritage Unit (a fee may be charged for this service) or can be inspected directly (at no cost) during normal office hours at the Heritage Unit, Level 2, Macarthur House, 12 Wattle Street, Lyneham ACT 2602. Note that some information on the register may have "restricted access" conditions. Applications for access to Restricted Information may be submitted to the Secretary, ACT Heritage Council, PO Box 144, Lyneham ACT 2602.
- *Legislation.* All heritage places and objects in the ACT are protected via the *ACT Heritage Act 2004*. This legislation requires that a person who discovers a place or object and has reasonable grounds for believing it is an Aboriginal place or object, must report the discovery to the Heritage Council within one week after the discovery. A copy of the Act can be accessed online at <http://www.legislation.act.gov.au/a/2004-57/default.asp>. A series of fact sheets explaining how the ACT heritage legislation works is available from the Heritage Unit (at no cost) or may be accessed online at: <http://www.environment.act.gov.au/heritage/heritagelegislation>.
- *Artifacts.* Territory-owned Aboriginal objects are currently lodged with the Heritage Unit, pending establishment of a Ministerial approved repository or Keeping Place.

- *Human skeletal material.* Must be reported to the police in the first instance.
- *Climate.* The ACT experiences four distinct seasons. The summer months are hot and very dry, with January temperatures often reaching 40°C. In contrast, during the winter months it can be extremely cold (overnight temperatures often reach below zero) with heavy fogs and frequent frosts. Namadgi National Park and Tidbinbilla Nature Reserve, located in the southern part of the Territory, form the northernmost part of the Australian Alps and can experience heavy snowfall during winter. Rainfall is heaviest during the spring and summer months, although the yearly average rainfall is only about 600 mm. Weather conditions in the ACT can change rapidly, so when in the field make sure that you have adequate clothing, water and first-aid supplies. Proficiency at reading maps and applying first-aid is also essential.
- *Access.* The ACT is the only Australian state or territory that is entirely landlocked. Canberra (the capital city) has an International Airport and can also be reached easily by road. There is good vehicle access to parts of Namadgi National Park and Tidbinbilla Nature Reserve, however adverse weather conditions can restrict access, particularly during the winter months. Entry to private land requires the permission of the landowner or lessee.
- *Distance.* Canberra, Australia's capital, lies in the north of the ACT and is the gateway to the snow fields in Kosciusko National Park about two hours drive to the south. The scenic south coast of NSW is a similar distance to the east. The ACT is a little smaller than Rhode Island, very small in comparison to other Australian states and territories, and covers only ca 2,400 square kilometres. Parts of Namadgi National Park and Tidbinbilla Nature Reserve are very rugged and comparatively remote with limited vehicle access, so make sure you have adequate water, warm clothing during winter and that you let the Park/Reserve Rangers know when to expect you back.
- *Maps.* Topographic maps covering the ACT are available at 1:10,000 and 1:25,000 scales, with a new 1:100,000 topographic/orthophoto map released in February 2005. Cadastral maps at scales of 1:500, 1:2,500 (urban) and 1:25,000 (rural) and vertical color photography at a scale of 1:52,000 are also available. The ACT Planning and Land Authority (<http://www.actpla.act.gov.au>) and Geoscience Australia (<http://www.ga.gov.au>) are good places to find out about or to purchase available maps. The Heritage Unit holds a variety of maps, including the 1915 Federal Territory Feature maps, Land Tenure, archaeological survey and photogrammetry maps. The National Library of Australia (<http://www.nla.gov.au>) is another useful resource for maps.

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5.2.4. Victoria (*Vict*)

Along with New South Wales, Victoria has a robust and integrated suite of heritage legislation and provides blanket protection for archaeological sites. *The Aboriginal Heritage Act 2006* provides the legal protection for Aboriginal heritage. Specifically this act protects all materials relating to past Aboriginal occupation (including sites, artifacts and human remains) and includes both known (recorded) and unknown (unrecorded) Aboriginal sites. Aboriginal Affairs Victoria* (AAV) is the government body responsible for administering this legislation. A permit is required for all excavation or disturbance, for scientific research on Aboriginal places, or for any activity that is likely to harm Aboriginal cultural heritage. In addition Aboriginal Affairs Victoria has a preferred format for reports and project data submission that you must follow (AAV, 2002). At the time of going to press the mechanics of this new legislation—i.e. the regulations and guidelines by which it will work—were still under development.

Similar to the *Queensland Aboriginal Cultural Heritage Act 2003*, the Victorian *AH Act* established a system of Registered Aboriginal Parties (RAPs) to give advice on heritage management decisions, and a state-wide Victorian Aboriginal Heritage Council to provide a voice for Aboriginal people and to advise the minister of Aboriginal Affairs on cultural heritage management issues. The *AH Act* imposes several requirements on developers and land owners, including a need to obtain approved Aboriginal Cultural Heritage Management Plans (ACHMPs), Aboriginal Cultural Heritage Permits (ACHPs), and Aboriginal Cultural Heritage Agreements (ACHAs) to manage potentially harmful activities. An ACHMP is an essential ‘first step’ in the process of managing cultural heritage and, until it is complete (and has also been approved), no further permits or licenses can be issued. Registered Aboriginal Parties may approve management plans.

The *Victorian Heritage Act 1995* is administered by Heritage Victoria* and is the Victorian Government’s key piece of cultural heritage legislation relating to historic sites. All non-Aboriginal archaeological sites in Victoria older than 50 years are protected under this act, whether they have been recorded by Heritage Victoria or not. The *VHA* enables the identification and protection of heritage places and objects that are significant to the State of Victoria and established the Victorian Heritage Register, the Heritage Inventory and the Heritage Council of Victoria*.

In Victoria no site can be destroyed without prior archaeological assessment by a qualified archaeologist, and there is consistent implementation of the legislation so that all development work has to incorporate the potential for finding archaeological artifacts or deposits. Some sites may have to be professionally excavated by archaeologists prior to destruction, while other less significant sites may need to be monitored by a qualified archaeologist to ensure the proper recording of any significant material found during work.

As in Queensland and New South Wales, the Victorian *Planning and Environment Act 1987* gives certain powers for the management of heritage to municipal

and shire councils. For example, places and objects of local importance can be included in local planning schemes through inclusion in a “heritage overlay”.

If you are carrying out fieldwork on land managed by Parks Victoria*, you will need to obtain a separate research permit.

Jane Lydon’s Guide to Doing Archaeology in Victoria

- In Victoria, Aboriginal and “historic” heritage are administered separately, so that projects involving Aboriginal historic sites must go through a double permit and consultation process.
- Aboriginal heritage places, sites and objects in Victoria are, from April 2006, protected by the state *Aboriginal Heritage Act 2006* administered by Aboriginal Affairs Victoria (AAV, Tel 03-9208 3244).
- This Act is intended to provide more effective protection of Aboriginal cultural heritage, to broaden the involvement of Aboriginal people, and link heritage protection more directly to planning and land development than was previously the case. Key proposals include establishment of a Victorian Aboriginal Heritage Council, a system of Registered Aboriginal Parties, establishment of Aboriginal Cultural Heritage Assessment and Permit processes, a system of Cultural Heritage Agreements, and strengthening provisions relating to enforcement. (For inquiries and the latest update call AAV, and see: http://www1.dvc.vic.gov.au/aav/heritage_bill/index.htm).
- Under the Cultural Heritage Program, the state is divided into regions, and the relevant Cultural Heritage Officers should be the initial point of contact for anyone wishing to conduct archaeological work involving Aboriginal heritage.
- Historic places including archaeological sites are protected by the *Heritage Act 1995*, and are listed on either the Heritage Inventory, or, if of state significance, the Victorian Heritage Register. Places of joint Aboriginal and historic significance, such as former missions, can also be included in the Heritage Register for their non-Aboriginal values (administered by Heritage Victoria: 03-9655 6519).

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5.2.5. Tasmania (Tas)

Aboriginal cultural heritage in Tasmania is protected by *The Aboriginal Relics Act 1975*, which is administered by the Aboriginal Heritage Office, Department

of Tourism, Parks, Heritage and the Arts*. Although it follows the NSW model, the *AR Act* only applies to relics created before 1876 (i.e. before the death of Truganini, an Aboriginal woman whom white settlers at the time believed to be the last Tasmanian Aborigine). It has little application to contemporary Aboriginal culture or to areas that are of particular significance in accordance with Aboriginal tradition, unless those areas are also the site of relics as defined under the Act.

The *Historic Cultural Heritage Act 1995* is also administered by the Department of Tourism, Parks, Heritage and the Arts, through the office of Heritage Tasmania* (also referred to as the Tasmanian Heritage Office). The *HCH Act* established both the Heritage Council* and the Tasmanian Heritage Register and was amended by the *Historic Cultural Heritage Amendment Act 1997*.

The Tasmanian Parks and Wildlife Service* (TPWS) administers the *National Parks and Wildlife Act 1970*, under which it manages National Parks and other state-level reserves. The TPWS has its own Cultural Heritage Unit which manages historic sites under the *Parks and Reserves Management Act 2002*.

Angie McGowan's Guide to Doing Archaeology in Tasmania

- The only historic sites for which you must obtain Government approval to excavate are those listed on the Tasmanian Heritage Register. Archaeological excavations are “works” as defined in the *Historic Cultural Heritage Act 1995*. For further information you will need to contact the Tasmanian Heritage Office or go to the Tasmanian Heritage Council website.
- To collect Aboriginal relics (as defined under the *Aboriginal Relics Act 1975*, i.e. Aboriginal relics made before 1876) or to excavate an Aboriginal site (sites are included in the definition of a relic), you must obtain a permit from the Minister. For further information you will need to contact the Aboriginal Heritage Office. NB: the Minister always seeks comment from the Aboriginal community before issuing a permit under the *Aboriginal Relics Act 1975*.
- To excavate in search of an Aboriginal relic on Crown Land (regardless of whether you will actually disturb any relics) you must obtain a permit under the *Aboriginal Relics Act 1975* from the Minister.
- To excavate or collect Aboriginal relics (as defined in the *Aboriginal Relics Act 1975*) or archaeological objects (including Aboriginal artifacts made after 1876 and historic objects) from historic and Aboriginal sites on reserved land or on public reserves you must obtain authority from the managing authority. This is in addition to any permit from the Minister under the *Aboriginal Relics Act 1975* or approval under the *Historic Cultural Heritage Act 1995* which may be required. Many reserved lands and public reserves are managed by the Parks and Wildlife Service—Contact the relevant District Manager for information. Some reserved lands and public reserves are managed by other authorities, such as municipal councils, Forestry Tasmania, the Port Arthur Historic Site Management Authority, the Wellington Park Management Trust and the National Trust.

- Before authorizing the excavation of an historic site on reserved land that it manages, the PWS requires the archaeologist to obtain a permit under the *Aboriginal Relics Act 1975* for Aboriginal relics in secondary (i.e. historic) contexts.
- All archaeological projects which involve Aboriginal heritage, including excavations, surveys, collections research, and excavations at historic sites where Aboriginal heritage may be encountered, should include adequate consultation with the Aboriginal community. Depending on the nature of the project the Tasmanian Aboriginal Land Council, the Tasmanian Aboriginal Centre and local Aboriginal groups may have an interest. If you are unsure of who to consult, you can contact the Aboriginal Heritage Office for advice.
- The Tasmanian Heritage Council* have issued a Practice Note for archaeological requirements, "Practice Note No 2 Archaeological Requirements". Developers and archaeologists undertaking research excavations need to adhere to this practice note where the Heritage Council has identified the potential presence of significant archaeological deposits that require protection. Archaeologists engaged by developers should be familiar with the Heritage Council's requirements. Download a copy from the Tasmanian Heritage Council's website (http://www.heritage.tas.gov.au/practice_notes.html).
- Archaeology is not routinely factored into the development or planning approvals process except under Forest Practices Plans. Some major developers, such as Telstra, Dept Infrastructure Energy and Transport, and Hydro Tasmania regularly conduct heritage surveys. Archaeological surveys are not routinely conducted as part of the development process at the local government level.
- Under most planning schemes archaeological excavations would be categorized as "works" (as defined by the *Land Use Planning Approvals Act 1993*) and a planning application may need to be lodged, depending on how the land is zoned. For more information you can check with the relevant local government authority.
- *Educational institutions.* The University of Tasmania does not have an Archaeology Department. Several mainland and international universities have pursued specific research interests in Tasmanian archaeology.
- *Archaeology associations.* There are no archaeology associations *per se* in Tasmania. Cultural Heritage Practitioners Tasmania, however, is a network of cultural heritage practitioners working in Tasmania and includes archaeologists and people with an interest in Tasmanian archaeology. The Tasmanian Aboriginal Land Council acts as the umbrella organization for Aboriginal heritage matters.
- *Site data bases.* All Aboriginal sites must be reported to the Aboriginal Heritage Office under the *Aboriginal Relics Act 1975*. Aboriginal sites are listed on the Tasmanian Aboriginal Site Index (TASI). The Tasmanian Heritage Office maintains the Tasmanian Heritage Register that lists historic sites of significance under the *Historical Cultural Heritage Act 1995*. The Tasmanian Heritage Office and the Parks and Wildlife Service maintain the Tasmanian

Historic Places Index (THPI), a database of information on historic sites identified and recorded by the Government agencies. It covers all land tenures.

- Tasmania is a small place. If you need some local expertise when you are planning on undertaking research on the island, please feel free to contact local professionals.

Notes supplied by Angie McGowan on behalf of the Tasmanian Heritage Office, August 2004.

5.2.6. South Australia (SA)

Aboriginal heritage in South Australia is protected under *The Aboriginal Heritage Act 1988*, administered by the Department of Aboriginal Affairs and Reconciliation* (DAARE). The Act only provides legal protection to Aboriginal sites already listed on the Register of Aboriginal Sites and Objects, although DAARE strongly advises that all development likely to affect unknown Aboriginal sites should be carried out under the auspices of a Section 12 permit to determine whether or not there are Aboriginal sites or objects in the area.

The South Australian *Heritage Places Act 1993* replaced the older *Heritage Act 1993* as the main instrument for protecting the historic heritage of South Australia. It is administered by the Heritage Branch of the Department for Environment and Heritage*. The Heritage Branch also manages the South Australian Heritage Register, a listing of all places of state and local significance within the state. In South Australia, historical archaeological sites are best protected if they are already listed on the SA Heritage Register, although the *HP Act* also requires a permit to excavate anywhere in South Australia in search of artifacts of heritage significance, or for any other purpose where such artifacts can reasonably be expected to exist. This includes non-archaeological excavation or disturbance in areas where it is known that artifacts are likely to be encountered or where there is a reasonable expectation that this will happen.

Other recent proposed changes to legislation include the *Development (Sustainable Development) Amendment Bill 2005*. This is designed to amend the South Australian *Development Act 1993* and is tied to the provisions of the *HP Act*. If successfully amended, the *Development Act* will tighten the way that local councils protect heritage items under their jurisdiction. Local government authorities will be required to undertake mandatory heritage surveys and five yearly reviews, and to prepare heritage plans that will identify items of local heritage significance.

A final relevant legislative change was to the *Historic Shipwrecks Act 1981*. *The Statutes Amendment (Environment And Conservation Portfolio) Bill 2005* amended the *HSA 1981* to introduce a blanket 75 year protection period for shipwrecks in South Australian waters. This brings South Australian maritime archaeological legislation in line with the Commonwealth model (for more information, see Chapter 8).

As in Tasmania and Queensland, if you are conducting research within a South Australian National Park, you will also need to obtain a research permit from the

Science and Conservation Branch* of the Department for the Environment and Heritage.

Alice Gorman's Guide to Doing Archaeology in South Australia

- In many areas, Aboriginal societies will be structured so that there is men's business and women's business. Some of this information will be secret (and you will have to accept that) while other information may be open to discussion with a male or a female archaeologist or anthropologist. Therefore, you may need to have at least one person of each gender in your team.
- Doing archaeology at any Aboriginal site will require Aboriginal permission, ethically if not legally. If you intend undertaking analysis that requires taking samples of human remains, or artifactual material, you will have to obtain written permission from the appropriate Aboriginal people.
- In order to obtain information about existing sites contained in the database maintained by the Department of Aboriginal Affairs and Reconciliation, you will need written consent from the Traditional Owners.
- Climate in South Australia ranges from mild coastal areas, to fierce desert conditions. Do not underestimate the requirements of working in the desert and make sure you have appropriate communications and safety plans in place.
- When working in conditions of extreme heat, drink about a cup of water every 15 minutes to keep hydrated. Don't wait until you are thirsty.
- The South Australian Museum contains one of the largest collections of Aboriginal artifacts in the world. It is worth checking their collections prior to undertaking fieldwork.
- Some parts of South Australia have been affected by nuclear tests that took place in the 1950s. Investigate obtaining permits, permissions and health and safety requirements before you contemplate working in any such areas.
- Unlike most of Australia, South Australia did not originate as a penal colony, and the Native Title situation is different to that which obtains in other states. This means that you cannot assume that the issues are the same.
- Topographic maps are available in 1:100,000 and 1:50,000 scales.
- Don't assume that because an Aboriginal person or group has been separated from their country, they don't have knowledge or stories about that country, or a custodial interest or legal right in it.
- If you are excavating within a National Park or Conservation Park you will need to consult with and obtain a permit from both the Parks Service section of the Department for Environment and Heritage and the Department of Aboriginal Affairs and Reconciliation. At the moment there is no clear system for who you need to get permission from first, so you will need to apply to both offices at the same time and ensure that they each speak to the other to avoid long delays.

- Since there is no system of land councils in South Australia, the best way to contact Indigenous groups is through the Department of Aboriginal Affairs and Reconciliation.

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5.2.7. Western Australia (WA)

The principal legislation governing Indigenous sites in Western Australia is the *Aboriginal Heritage Act 1972*. Under this act, it is an offence to damage a site, regardless of whether or not the site is on public or private land, and whether or not the site is registered. In practice, applications are first assessed by the Heritage and Culture Division of the Department of Indigenous Affairs* (DIA), which provides advice to the Aboriginal Cultural Material Committee (ACMC). The Department will inform the developer whether or not any registered sites are present. Even if there are none, the developer/applicant may be required to carry out an Aboriginal heritage survey. The ACMC forms an opinion as to whether there is any Aboriginal sites on the land, evaluates the importance and significance of any such sites and may call for more information if the report is inadequate. It then submits the notice to the Minister with a recommendation as to whether or not the Minister should consent to the use of the land. Consent may be recommended on certain conditions. The DIA have their own Aboriginal Heritage Procedures Manual that outlines when and how the permitting process is undertaken and the resulting reporting requirements that will be expected of you (<http://www.dia.wa.gov.au/Heritage/HeritageManual/default.aspx>).

The Heritage of Western Australia Act 1990 created the Heritage Council of Western Australia*, and defined criteria for adding properties to the Register of Historic Places. This act does not refer to Aboriginal sites, and it only protects historical archaeological sites if they are already listed on the state's Register. Other historical sites receive no protection unless it can be argued that they are also Indigenous (i.e. contact) sites.

Jane Balme's and Kate Morse's Guide to Doing Archaeology in Western Australia

Legislation:

- All Aboriginal sites are protected by the *Aboriginal Heritage Act 1972*. The definition of Aboriginal site in this Act is very broad and includes places where material culture which is connected to traditional cultural life of Aboriginal people in the past or present has been left, places of special significance to Aboriginal people, places where objects have been stored (even if they

have now been removed) and places of anthropological, archaeological or ethnographic significance.

- Permission from the Minister must be given before any Aboriginal site is disturbed. This permission should be sought through the Department of Indigenous Affairs that administers the Act. Permits are not issued unless approval for the work has been given by the relevant Aboriginal community. The Department of Indigenous Affairs will give advice on how to contact the relevant community.
- Built places that are on the State Register of Heritage Places are protected by the *Heritage of Western Australia Act 1990*. Anyone can nominate a place for registration, but the nominations are assessed by the Heritage Council for inclusion on the register.

Other issues:

- *Access.* As Western Australia is very large, access conditions are variable and in the north, the wet season restricts access to many areas. Most fieldwork outside the south west region of Western Australia is done between March and October. At other times it is too hot for comfortable working conditions. Permits are required to access some Aboriginal reserves managed by the Aboriginal Lands Trust. Permits can be obtained online through the Department of Indigenous Affairs website (<http://www.dia.wa.gov.au/Land/Permits/permit-form.aspx>). If the land is privately owned then permission from the landowner must also be obtained.
- *Artifacts.* The Western Australian Museum* has taken responsibility for collections in the past, however lack of space is affecting their ability to continue to provide this service. Aboriginal communities often want artifacts returned after analysis. You will need to discuss this with the Community and the Department of Indigenous Affairs.
- Aboriginal burials are protected under the *Aboriginal Heritage Act*. Much of the skeletal material previously held in collections has now been repatriated and new finds are usually re-buried according to the custodians' wishes.
- *Development.* The Department of Indigenous Affairs (DIA) has a very good web page that explains developers' legal obligations under the Aboriginal Heritage Act (<http://www.dia.wa.gov.au/Heritage/IntroForDevelopers.aspx>). Essentially they must make a reasonable effort to find out whether the development will impact Aboriginal sites. The procedures involved are also on the DIA website (<http://www.dia.wa.gov.au/Heritage/HeritageManual/default.aspx>). Under the *Heritage of Western Australia Act* people considering development of a listed place must seek advice from the Heritage Council before development and all work must comply with the Heritage Council's advice.
- *Distance.* Complete a Four Wheel Drive training course and make sure that you can change and repair tyres before you set out to remote places. Also check that your four wheel drive is fully equipped with extra fan belts, tyre

changing/repair equipment, a winch and equipment such as chains for getting out of bogs etc. Make sure that someone on your team has a current first aid certificate and carry a satellite telephone.

- *Mapping resources.* There is very good coverage of Western Australia at a wide variety of scales. Topographic and other maps, including raster CD maps as well as aerial photography, can be obtained from the Department of Land Information (DLI). A list of maps for sale is on the DLI website at <http://www.dola.wa.gov.au/corporate.nsf>.
- *Site resources.* The Department of Indigenous Affairs (DIA) maintains a site register. There is an online version of this register (<http://www.dia.wa.gov.au/gis/asp/gistheme.asp>) in which you can search information about sites by type, location etc. The online version does not include reports, which must still be obtained by visiting the department and, where Aboriginal people have requested it, the details of some sites are excluded. The online version can also only be accessed via windows so it does not work with a Macintosh computer. Mining companies have the most detailed and up to date maps of sites in their areas. They often keep their own site databases too.
- *Other resources.* The DIA website (<http://www.dia.wa.gov.au>) is a source of lots of other useful information, including maps of Aboriginal communities in Western Australia, reserves managed by the land trust and Tindale's tribal map for Western Australia.
- *Reports.* Copies of reports should be given to the Department of Indigenous Affairs (DIA). Before the final report is submitted a draft should be given to the Aboriginal representative body for comment. You should also check with the representative body before you submit your site information to the DIA.
- *Health.* Consider doing a first aid course, especially if you plan to work in remote areas. In addition to first aid knowledge, an up to date and complete first aid box is also essential. As the main threat in the Australian bush is the sun, don't forget heaps of sun cream, hats and long sleeved shirts. In hot weather count on about five litres of drinking water per person a day.

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5.2.8. Northern Territory (NT)

The Heritage Conservation Act 1991 encompasses all types of heritage and set up the Northern Territory's Heritage Advisory Council*. Administered by the Department of Natural Resources, Environment and the Arts*, the *HC Act* also established the Northern Territory's Heritage Register. This act gives blanket protection to all Indigenous archaeological sites in the Northern Territory, including Maccassan



FIGURE 5.1. Ngalkpon Elder Maggie Tucumba at registered sacred site, central Arnhem Land, Northern Territory.

archaeological sites. Proposed amendments to this act will widen this definition of Aboriginal sites to also include “post-contact” sites.

The Aboriginal Sacred Sites Act 1989 charges the Aboriginal Areas Protection Authority* of the NT with maintaining a Register of Sacred Sites. A sacred site is any place that is important to Aboriginal people and the law makes it clear that it is the significance of a site to Aboriginal people themselves which is the determining factor. Registered sites may be acquired by the NT Administrator and non-Aboriginal people require permits to enter such sites. The fine for trespassing on a registered sacred site is \$20,000 (Figure 5.1).

If you are working in a National Park in the Northern Territory you will also need to apply for a separate research permit from the Parks & Wildlife Service*. This is simply to ensure that all research conducted within National Parks is sound and conforms to their guidelines.

Richard Woolfe’s Guide to Doing Archaeology in the Northern Territory

Legislation:

- *The Northern Territory Aboriginal Sacred Sites Act* registers sacred sites and other sites significant to Aboriginal people in the Aboriginal tradition. The Authority also provides clearance certificates to developers on application. Charges apply for a register search and a clearance. The agency responsible for this legislation is the Aboriginal Areas Protection Authority (AAPA).

- The *Heritage Conservation Act* provides “blanket” protection to all Aboriginal and Macassan archaeological places and objects until the Minister makes a decision, based on advice from the Heritage Advisory Council on whether or not sites and objects should be permanently conserved. Permits are required to disturb any site. Historical places and objects are not protected unless they are on the Northern Territory Heritage Register.

Other issues:

- *Access.* The Top End wet season restricts access to many areas, even those close to the main population centers. Permits are required to access Aboriginal lands (see relevant Land Council). It is also wise to obtain permission to enter land from the actual owner and/or the community council.
- *Artifacts.* There is no single recognized repository for artifacts in the Northern Territory. The Museum and Art Gallery of the Northern Territory* has taken responsibility for collections in the past, however lack of space is affecting their ability to continue to provide this service. Some Aboriginal communities will want artifacts returned after analysis. Charles Darwin University* also stores a limited collection.
- *Aboriginal skeletal remains in archaeological sites.* These are protected by the *Heritage Conservation Act*. The Aboriginal Areas Protection Authority has the responsibility of dealing with any remains located. If remains are located, don't disturb them, record their location on your GPS and contact the AAPA for advice.
- *Developers.* Developers are sometimes required to lodge a Notice of Intent under the *NT Environment Assessment Act* before commencing a project. The EPA advises the Government on the level of environmental or archaeological study required prior to gaining consent.
- *Climate.* The Top End has a typical Wet/Dry climate, comfortable from May to September. The fire burn off period from May to July burns about 50% of the Top End each year, often improving ground visibility. In Central Australia extreme summertime temperatures make winter and spring a favored time for field scientists.
- *Distance and remoteness.* Be self-sufficient in the field, especially in remote areas. It is a good idea to take along four wheel drive recovery gear in your vehicle, and know how to use it. Read a good remote logistics manual and a Four Wheel Drive recovery manual before embarking on remote fieldwork.
- *Mapping resources.* The Natmap 1:250,000 series covers the entire Territory. There are updated 1:50,000 and 1:100,000 maps available for the Top End (i.e. north) only. 1:100,000 maps exist for most other areas, however some are very old.
- *Reports.* It is wise to send a copy of archaeological reports to The Director, Heritage Conservation Services, Natural Resources, Environment and the Arts*. It is compulsory to send the Director location information on any Aboriginal or Macassan sites recorded.

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5.3. Native Title

The existence of distinctly Aboriginal relationships to land in all parts of Australia has been recognized in both State and Federal legislation. Initially, this was through the passage of a series of Aboriginal Land Rights Acts during the 1970s and 1980s, each of which is specific to a particular state or territory. The underlying premise of this legislation is that Aboriginal relationships to land are fundamentally different to those of non-Aboriginal people (cf. Morphy, 1993:230) and that Indigenous rights are at stake. More recently, recognition of Aboriginal sovereignty at the time of contact was made in the 1992 High Court decision in favor of Torres Strait Islander Eddie Mabo and others (see Coe, 1992). By rejecting the doctrine of *terra nullius* this decision recognized that Aboriginal and Torres Strait Islander people held a form of native title over the lands of Australia at the time of contact.

The *Federal Native Title Act 1993* formally recognized native title rights and interests in Australian land and waters. This Act established the National Native Title Tribunal and gave the Federal Court jurisdiction in matters pertaining to native title. From an Aboriginal perspective, this recent legislation has merely caused land to be recognized in non-Aboriginal law as Aboriginal land. The existence and content of Native Title rights is derived from traditional Aboriginal laws and customs, which can vary from one Aboriginal group to another. From a legal perspective Native Title rights (van Hattem, 1997):

- Are held communally by the members of the Aboriginal group whose traditional laws and customs gave rise to them.
- Are not transferable, although they can be surrendered to the Crown and, in certain circumstances, extinguished.
- Are not granted. They are inherited in accordance with the traditional laws and customs of the Aboriginal people concerned.

In neither northern nor southern Australia do Aboriginal people ever appear to have considered the land to be owned legitimately by anyone other than themselves, though they have recognized various constraints upon their movement across, and use of, the land during periods when it has been appropriated for European purposes (e.g. Goodall, 1996; Rose, 1991; Ryan, 1995).

Indigenous groups have also argued for sea and other water rights as part of their native title rights (e.g. Memmot & McDougall, 2003). The traditional country of Indigenous groups along the coast often extends into the sea, and Dreaming trails may include sites that became submerged with rising sea levels during the last few thousand years. The test case here was put forward by the traditional owners of

Croker Island, located off the coast of Arnhem Land, Northern Territory. When questioned under cross-examination as to the extent of her traditional sea country Mary Yarmirr, one of the main Indigenous witnesses in the hearing of this case, replied, “As far as my eyes can carry me” (Aboriginal & Torres Strait Islander Justice Commissioner, 2000). The notion of Indigenous rights to sea can be difficult for Europeans to understand, since it challenges the traditional European boundary between land and water. The notion of sea rights is based on the Indigenous notion that there is no essential difference between the two:

The prime example of this unity of land and sea country is the dreaming story. Typically, it is the sacred account of the creation of the physical and social world by dreaming ancestors in their heroic and ancient travels that are recounted in song cycles, ceremonies, designs and ultimately the basis for claims to country according to traditional laws and customs. The ancestral journeys often commence out at sea then move closer to land, creating seascapes— islands, reefs, sandbars and so on—and travel on to create landscapes. Thus the kinds of connections that are widely documented in relation to land are also present in relation to sea country (Aboriginal & Torres Strait Islander Justice Commissioner, 2000).

In 1998 the Federal Court recognized the existence of native title sea rights. Since few cases anywhere in the world have dealt with this issue as exhaustively as the Croker Island case, this decision provided an important international precedent. However, the decision also found that Indigenous sea rights were non-exclusive and non-commercial, which allowed for a common law public right to fish and navigate in these waters and prevented their exclusive Indigenous possession, occupation, use and enjoyment. However, there are implications for the rights of Indigenous Australians to protect their lands and resources in order to ensure their cultural survival, especially if considered in regards to Article 27 of the *International Covenant on Civil and Political Rights* (ICCPR), which provides:

Members of ethnic, religious or linguistic minorities shall not be denied the right, in community with members of their group, to enjoy their own culture, to profess and practise their own religion, or to use their own language.

Much of the detailed information about the complexities of traditional land and sea rights has come from remote areas where Indigenous peoples have been able to maintain reasonably continuous contact with their traditional land and sea countries throughout the period of colonisation. In some parts of Australia, especially in the south, knowledge of the intricacies of customary law about land and sea has been eroded. However, these hereditary rights are still asserted through traditional mechanisms. For example, rights to land in areas where there is more than one person or group of people with hereditary ties, and which has the potential to become subject to dispute, may be asserted through knowledge of the Aboriginal language names and mythological histories for those particular locales. The practice of archaeology factors into Native Title through:

- Recording sites, as proof of occupation and as a demonstration of the antiquity of that occupation.

- Helping Aboriginal people to document on-going land use, which is part of demonstrating continuous links to that land. This can include picnics and family outings, as well as ceremonial use of the land.
- Showing that the land is used in culturally specific ways, e.g. through gendered site visits.

It is difficult to know precisely which Indigenous groups have ties to particular areas and therefore who you should consult in any given archaeological circumstance. People have shifted and residence patterns have changed substantially since contact, although traditional links to country have been maintained in various ways. A key initial resource for identifying whose country a site may be located within—although one not without flaws—is Norman Tindale’s 1974 map of Australian Aboriginal language groups. Tindale spent fifty years trying to map the location of hundreds of language groups, and published the first version of his map in 1940. As an enormous personal achievement, Tindale’s map directly countered the until-then common viewpoint that all Aboriginal people simply roamed across the land and kept to no fixed or mutually understood territories. Regardless of how much personal labor it represented, however, Tindale still made many errors in his rendering of language groups and associated tracts of country. The information he recorded for some areas of Australia, in which he himself spent considerable amounts of time, is much more reliable than others, for which he relied on second or third hand information. Cape York, the Torres Strait and the north-central Northern Territory were (and still are) all problematic areas on Tindale’s map (McConvell & Thieberger, 2005). A critical point to bear in mind here is that the original map, and its two updated editions (Tindale 1974; Horton 1994 see also Figure 2.2) are artifacts of European ways of thinking. While such maps are very useful for heuristic purposes, when dealing with Native Title issues they need to be used with a certain amount of caution. In Aboriginal societies, land boundaries were often blurred, rather than distinct lines on a map (see discussion of Hiatt’s work in Chapter Two). Moreover, all Aboriginal people have ties to more than one area of land, through both parents and grandparents. These ties are mechanisms through which people choose their affiliations as adults and through which rights and responsibilities to land are transferred if the principal land-owning group dies out, as has happened in some parts of Australia. In terms of Native Title, the point to remember is that more than one group of people will have legitimate rights in any tract of land. If you work on a Native Title claim, some part of your work will involve sorting through this complexity.

5.4. Other Forms of Regulating Archaeological Work

5.4.1. *Standardization of Practice and Data*

Legislation is not the only means to regulate the standard of archaeological work in Australia. The administrative requirements of the relevant government agencies obviously help to formalize standards by requiring practitioners to adhere

to certain modes of reporting (e.g. the assessment of reports and requests for clarification or extension of sections of reports are routine) and fieldwork (e.g. that proper consultation has been undertaken or final site remediation completed satisfactorily). They also regulate who can do the work, by ensuring that the permitting process has been followed properly, that only people with adequate qualifications can undertake the work and that the information collected (including site cards, grid references, and reports) is presented in a standardized manner. None of this is designed to hold up the archaeological process, but to ensure that your data is collected, recorded and archived in a way that makes it comparable with other projects and that it is of a sufficiently high standard. One of the main problems with consultancy projects is that the survey methods and results of recording and analysis are not always clearly presented, or use unclear or idiosyncratic descriptive terms. This often means that results from one project cannot be compared to similar projects elsewhere and therefore cannot be factored into the bigger picture of regional archaeological analysis and interpretation. Given that millions of dollars have been, and will continue to be, spent on consultancy projects, it is vitally important that the data from such work is made comparable and therefore available to contribute to the pool of current knowledge.

Most state government agencies maintain some form of database or register of heritage sites. Just as it may help your fieldwork to know what other sites have already been recorded in your area (but be aware that access to site databases or records may be restricted in some states or circumstances), so other researchers may want to know about your sites. Each state has its own set of standardized recording forms, so make sure you obtain copies of these *before* you go into the field and that you fill them in completely and accurately before you submit them.

It is also standard practice in Australia to ensure that reports from your fieldwork are available for others to refer to. This is not always possible, of course, particularly if your report contains secret/sacred or otherwise confidential information, but ideally you should supply one copy to the client or funding body, at least one copy to the appropriate state or federal heritage authority (but check with them about their particular requirements), copies to any interest groups who participated in the project (such as Aboriginal groups or local historical societies), one copy to accompany the finds (if your project involved collection or excavation), and one copy to the nearest appropriate public archive or library (Birmingham & Murray, 1987:92).

5.4.2. *Professional Associations*

In many ways the profession itself also attempts to regulate standards by formalizing codes of ethics within all of the major archaeological organizations. There is no formal regulatory body governing the archaeological profession in Australia, although the various voluntary bodies attempt to maintain standards of professional and ethical conduct. The three main organizations are:

- The Australian Archaeological Association Inc. (AAA).
- The Australian Association of Consulting Archaeologists Inc. (AACAI).
- The Australasian Institute of Maritime Archaeology (AIMA).

The Australian Archaeological Association is one of the largest archaeological organizations in Australia, representing a diverse membership of professionals, students and others with an interest in archaeology. In contrast, AACAI is an organization for professionals working in all fields of contract and public archaeology. AACAI also maintain a standard scale of rates for various levels of archaeological fieldwork and qualifications, and offer a list of member-consultants in each state. Like AAA, AIMA is a popular organization dedicated to promoting maritime archaeology and underwater cultural heritage projects in Australia and overseas. The Australian Archaeological Association, the Australian Anthropological Society, the Australasian Institute of Maritime Archaeology and the Australian Association of Consulting Archaeologists all have their own codes of ethics that clearly set out the ethical behaviors expected of their members (see Appendix 2). The other important professional organizations for Australian archaeologists are the Indo-Pacific Prehistory Association (IPPA), which is based at the Australian National University, and the World Archaeological Congress.

References and Further Reading

- Aboriginal Affairs Victoria (2002). *Guidelines for conducting and reporting upon archaeological surveys in Victoria*. <http://www1.dvc.vic.gov.au/aav/heritage/forms>.
- Aboriginal & Torres Strait Islander Justice Commissioner (2000). *Native Title report 2000*. Canberra: Commonwealth of Australia. http://www.hreoc.gov.au/social_justice/nt_report/index.html.
- Birmingham, J. & Murray, T. (1987). *Historical archaeology in Australia: A handbook*. National Estate Grants Program.
- Byrne, D. (Ed.) (1997). *Standards manual for archaeological practice in Aboriginal heritage management*. Sydney: NSW NPWS.
- Coe, P. (1992). Statement on behalf of the National Aboriginal and Islander Legal Services Secretariat. *UN working group on Indigenous populations: Tenth session. The Australian contribution* (pp. 69–71). Geneva, Switzerland: Department of Public Affairs, ATSIIC.
- Commissioner for Native Title (2000). *Native title and sea rights. Native Title Report 2000*. http://www.hreoc.gov.au/social_justice/nt_report/chap3.html#ch3_9.
- Goodall, H. (1996). *Invasion to embassy*. Sydney: Allen and Unwin.
- Horton, D. (Ed.) (1994). *Encyclopaedia of Aboriginal Australia*. Canberra: Australian Institute of Aboriginal and Torres Strait Islander Studies.
- McConvell, P. & Thieberger, N. (2005). Languages past and present. In B. Arthur & F. Morphy (Eds.), *Macquarie atlas of Indigenous Australia. Culture and society through space and time*. Sydney: Macquarie Library Pty Ltd, Macquarie University.
- Memmot, P. & McDougall, S. (2003). *Holding title and managing land in Cape York. Indigenous land management and native title*. Perth: National Native Title Tribunal.
- Morphy, H. (1993). Colonialism, history and the construction of place: The politics of landscape in Northern Australia. In B. Bender (Ed.), *Landscape: Politics and perspectives* (pp. 205–244). Oxford: Berg.

- National Native Title Tribunal (2000). *Short guide to Native Title*. Canberra: Commonwealth of Australia.
- Rigsby, B. (1998). A survey of property theory and tenure types. In B. Rigsby & N. Peterson (Eds.), *Customary marine tenure in Australia* (pp. 22–46). Oceania Monograph No. 48. Sydney: University of Sydney.
- Rose, D.B. (1991). *Hidden histories*. Canberra: Aboriginal Studies Press.
- Ryan, L. (1995). *The Aboriginal Tasmanians*. Sydney: Allen and Unwin.
- Sutton, P. (1995). *Country: Aboriginal boundaries and land ownership in Australia*. Canberra: Aboriginal History Inc.
- Tindale, N.B. (1974). *Aboriginal tribes of Australia: Their terrain, environmental controls, distribution, limits, and proper names*. Berkeley: University of California Press.
- Van Hattem, P. (1997). Demystifying native title. *E Law. Murdoch University Electronic Journal of Law* 4(3), [September 1997]. <http://www.murdoch.edu.au/elaw/issues/v4n3/vanh43.html>.
- United Nations (1976). International Covenant on Civil and Political Rights. <http://www.ohchr.org/english/law/ccpr.htm>.

Key Guides and Resources

- Australian Institute of Aboriginal and Torres Strait Islander Studies, Native Title Research Unit: <http://ntru.aiatsis.gov.au>. The NTRU has links to a range of information regarding Native Title, including discussion papers and the Native Title Resource Guide, an online resource that includes information on Native Title agreements, representative bodies, the National Native Title Tribunal, the Indigenous Land Corporation, government departments, the Federal Court and the Australasian Legal Information Institute.
- Department of Defence Heritage register: <http://www.defence.gov.au/environment/heritage/pages/register.htm>. This site collates Defence-related heritage sites from various lists around Australia.
- <http://www.heritage.gov.au/govtagencies.html>. This page, maintained by the Australian Heritage Council, contains a listing of all government and non-government agencies with interests in heritage. The larger site also offers a selection of key resources and links to site databases maintained by State, Territory and Commonwealth government bodies.
- <http://www.heritage.gov.au/laws.html>. Another page on the Australian Heritage Council website containing active links to the various pieces of heritage legislation in each state and territory.

6

Doing Archaeology in Aboriginal Australia

The many different ways in which Indigenous people have interacted with the land and with each other over the last 50,000 years have left behind many physical traces. Indigenous Australians were dynamic and highly adaptable. By 22–30,000 years ago they had used these abilities to occupy a wide range of environments, ranging from the tropical zones of northern Australia to the peri-glacial zones of Tasmania and even refuge areas in the deserts of central Australia (see Mulvaney & Kamminga, 1999). Tasmania, isolated from the rest of Australia for the last 8–10,000 years, developed its own unique culture (for more information see Chapter 2). As a result of this diversity there are many different kinds of Indigenous sites in Australia. This chapter deals with the issues of identifying the types of Indigenous sites likely to be encountered across Australia, researching Indigenous sites, and working with Indigenous Australians.

6.1. Types of Sites

There are a wide range of Indigenous sites in Australia. These include rock art sites, stone artifact scatters or open sites, shell middens, carved and scarred trees, quarries, burials, stone arrangements and post-contact sites. While a fieldworker can easily identify some of these sites with experience gained outside Australia, the majority are identified more easily once you have got your “eye in”, through gaining fieldwork experience in, or other familiarity with, Australian archaeology (see Figure 6.1).

6.1.1. Stone Artifact Scatters

These are the most common type of site across Australia—groups of stone artifacts found scattered on the ground surface. To differentiate these sites from those that occur within the protection of a rock shelter, such scatters are often referred to simply as “open sites”. You should remember, however, that there are also other types of open sites, such as middens, grinding grooves and stone arrangements. Indigenous Australians used different kinds of stone artifacts for

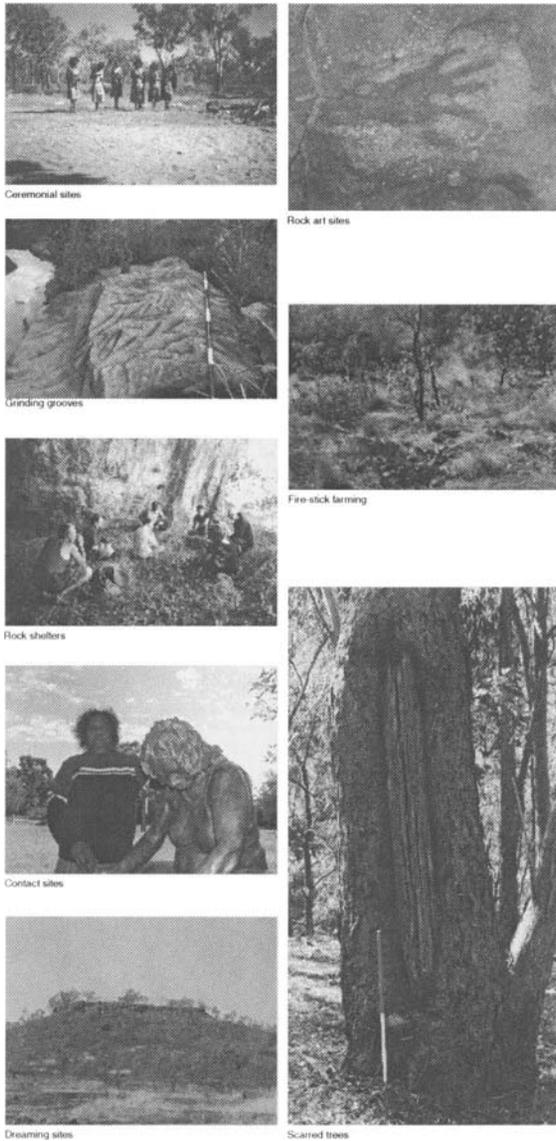


FIGURE 6.1. Some Aboriginal site types around Australia.

Ceremonial sites. Activities at these places may leave few physical traces.

Grinding grooves. The edges of stone axes were kept sharp by grinding them on suitable rock surfaces.

Rockshelters. These habitation sites often contain evidence for a wide range of activities.

Contact sites. This statue marks the location of Colebrook, Home, South

Dreaming sites. Many natural features of the landscape are invested with meaning by Indigenous people. This is a women's dreaming site in Arnhem Land, N.T.

Rock art sites. Hand stencils such as this are found across Australia.

'Fire stick farming'. Regular burning is just one of the ways in which Indigenous people managed the natural environment.

Scarred trees. Bark removed from trees was used for a variety of purposes, from drinking and carrying vessels to canoes.

many day-to-day purposes: skinning and butchering animals, grinding seeds and nuts, manufacturing wooden artifacts, or for hafting as axes, adzes, knives or spear points.

Open artifact scatters can range in size from a few artifacts to a high-density scatter containing a wide range of different artifact types. They can occur both as surface concentrations of material and as stratified deposits that may be dateable, and they may or may not be associated with other cultural remains, such as ochre, charcoal, shell or bone. Archaeological information from open sites can be used to infer a wide range of behavior, such as population movement, customary exchange systems, and even activity areas if there is a sufficiently wide range of complementary material. An artifact scatter does not necessarily imply that people actually camped on a site, but may indicate only that some type of activity was performed there (such as the manufacture of stone “tools”) or that people passed through the region.

6.1.2. Isolated Stone Artifacts

As the name implies this refers to individual stone artifacts found by themselves in no obvious association with any other artifacts. Although for some people the location of an isolated stone artifact is not strictly a “site” (the definition for which varies from state to state), it is often what the archaeologist will encounter. Of course, it is possible that there were once other artifacts there which have since been removed, or simply that the visibility conditions prevent you from seeing them. If you find such a site, make sure you search the area around it carefully to ensure that it is, indeed, an isolated artifact.

6.1.3. Shell Middens or Midden Scatters

The shell midden is a common site in Australia. A midden is literally a refuse dump left behind after people have eaten a meal. In shell middens, marine or freshwater shells are the dominant component. While a deposit with only a handful of scattered shells on its surface, or an excavated deposit that contains only a few sparsely-distributed shells, normally does *not* count as a midden (Val Attenbrow pers comm.), it still counts as a site, and should not be overlooked in site assessment. Shell middens can occur along coastlines, around estuaries, along coastal and inland river floodplains and around the shores of coastal or inland lakes. They can also occur as deposits within rockshelters and can range in size from a small, low-density surface scatter of shellfish remains to a high-density midden containing a variety of shellfish species, as well as stone artifacts and other archaeological remains (including burials). As with stone artifact scatters, the presence of a shell midden or midden scatter does not necessarily imply that people actually camped at a place, but may indicate only that they passed through the area.

6.1.4. Scarred Trees

These are trees from which bark has been removed for the manufacture of everyday items, such as containers, canoes or medicines. Bark could be removed either as sheets (for making shaped artifacts such as coolamons [shallow containers for carrying food, water etc], shields and canoes) or as fiber for making twine. Scarring can also occur from the making of toe-holds used to climb a tree or from the removal of possums, honey or grubs from the heart-wood of a tree. Such scars can vary in size and can often be distinguished from natural scarring by the regularity of their shape, their size and their location on the tree, as well as the presence of axe scars on margins of the exposed wood (for more detailed information on identifying scarred trees, see Long, 2003). Many different kinds of trees can be scarred.

6.1.5. Carved Trees

These are trees which have had designs carved into the bark or heart-wood and in some areas may have been used to mark burial or initiation sites (e.g. McBryde, 1974). The most common carving technique involved the removal of the outer bark and sapwood from a portion of the trunk, so that designs could be carved into the inner wood of the cleared panel.

6.1.6. Quarries

Quarry sites are locations from which Indigenous people have extracted stone for making stone artifacts, or ochre for use in painting. Stone artifact quarry-sources range from easily-acquired loose river cobbles to large outcrops which had to be actively quarried.

6.1.7. Stone Arrangements

These can range from cairns (piles of rocks) to extremely elaborate arrangements covering large areas. Some stone arrangements were used in ceremonial activities (e.g. to mark sacred or totemic sites), whilst others were constructed for more secular purposes (e.g. to act as route markers, hut walls, hunting hides or fish traps).

6.1.8. Rock Art Sites

Rock art in Australia is divided into two basic types: paintings/stencils and engravings. Rock art is produced either through the addition of colour, by painting, stencilling or drawing, or the removal of parts of the rock surface by pecking, grinding, abrading or engraving. In areas of northern Australia it is also produced by the addition of beeswax to the rock surface.

6.1.9. *Other Significant Sites*

These can be either modified sites/features or natural features of the landscape (such as rock outcrops or water sources) that possess special significance because of their role in Indigenous belief systems. These sites may be part of creation stories, or associated with important life events and ceremonies. Some may be unmodified features of the environment, in which case there may be few, if any, tangible features peculiar to these sites which indicate to non-Indigenous people that the place is of special significance. Independent information from Indigenous communities is essential for the identification of all such places.

6.1.10. *Burials*

Treatment of the dead by Indigenous people occurred in both historical/contact contexts (i.e. on campsites and missions) and in archaeological contexts (deposits which may be exposed by erosion, development or excavation). Such sites hold great significance for Indigenous people and the disturbance of burials or burial places is a very sensitive issue (for more information see “What to do if human remains are encountered”).

6.1.11. *Contact Sites*

Contact sites are places with evidence for contact between Indigenous Australians and other groups of people. In northern Australia there is extensive evidence of contact between Indigenous peoples and Macassan fishermen from Indonesia for at least 300 years prior to British colonization, and throughout the 1800s and 1900s there was extensive contact and intermarriage between Indigenous peoples and the Chinese. Similarly, there was contact between Indigenous Australians and various French and Dutch mariners as early as the 1600s, and with Afghans in central Australia throughout the 1800s, as well as other groups.

Contact sites are best identified through reference to the history of the region and the surrounding material culture, or through interviewing Indigenous people. For example, if you find a pile of cans in the middle of the bush, and are not sure whether these are the remains of a European or an Indigenous camp, you could start by looking for other types of material evidence. Are there stone artifacts or scarred trees close by? Does the site seem to be meaningfully located in relation to these? You need to remember that it is very difficult to prove a meaningful association between artifacts in a surface assemblage, as these materials could have been left behind at very different times, or seriously disturbed by various forces since they were deposited. So the location of a pile of tin cans near a stone artifact scatter or hearth does not automatically constitute a contact site. You would then need to consider the site in terms of the history of the area. If it is near a mission, a fringe camp or a pastoral station, or located on Indigenous lands or along Indigenous

travel pathways, the chances of it being a contact site would be greatly increased (although, of course, contact sites may still be found outside these areas).

Contact sites encompass a range of site types (rock art, middens, rock shelters, open artifact scatters etc.) but are also likely to incorporate the material culture of other groups. Contact sites are recorded using the methods suited to that particular site type, but there are some additional factors you need to keep in mind:

- It is extremely difficult to distinguish between glass that has been flaked intentionally and glass that has flake scars from being hit by a bulldozer, or crushed by some other means. Unless you are an expert at the identification of flaked glass, this is something that needs to be assessed critically in terms of the site location (e.g. is it in the middle of isolated bush, as opposed to beside or on a road?) and against other material that is found at the site (i.e. is there flaked stone there as well?).
- A contact site can be indicated by the use of material in a different context to that in which it is normally found. For example, some of the churches in northern Australia have a mixture of both Christian and Indigenous imagery.
- The contact period in Australia is contemporary and on-going. Indigenous Australians have kept distinct identities as native peoples, and continue to use material culture in a manner that is distinctly Indigenous, as well as in ways that are similar to those of non-Indigenous Australians.

All site recordings are conducted with two complementary purposes in mind: to record information about the contents, form and spatial arrangement of the site; and to record information about preservation conditions and other management issues. While for all sites you should always record a description of its physical location, the owner of the property on which it is found, a grid reference, and a plan of the site (as well as taking photographs), for all Indigenous sites you should also record:

- The location of any Indigenous plant resources nearby.
- Proximity of the site to the nearest reliable water source and its type (e.g. lake or river).
- Proximity of the site to the nearest water source and its type, regardless of its reliability (e.g. ephemeral creek).
- Proximity of the site to major Dreaming sites (if known).

Most administering authorities will have official site recording forms for each type of site (i.e. one form for rockshelters, one for stone arrangements, one for rock art sites etc.) that reflect the specific information that it is important to collect about each. It is well worth having a supply of these to take with you into the field in the event that you locate any sites.

6.2. Indigenous Artifacts

Unlike other places, Indigenous Australians had no ceramic traditions. From an archaeological viewpoint, the artifacts of Indigenous Australians largely were what

Flood (1983) characterizes as “documents of stone and bone”. Because of their durability, the most common artifacts found in Australia are stone artifacts, both flaked (chipped) and ground (including axes and grindstones). Artifacts made from wood, however, only survived in specific conditions, such as in swamps or arid areas, while those made from shell or bone, while more numerous, were also dependent on appropriate preservation environments. Some remains, such as hearths, survive only as traces, and while plant remains are found in some excavations, they are relatively rare. Other materials, such as woven fiber artifacts, are rarely found in archaeological contexts, though extensive ethnographic collections of these objects are held in major museums. Finally, following the arrival of European people, Indigenous Australians adopted many new artifacts, although they used them in distinctively Indigenous ways.

6.3. Stone Artifact Recording Systems in Australia

While Aboriginal people produced beautifully fashioned tools for specific purposes, they also were also opportunistic in their use of stone and other materials. They would often use whatever material was available for a single event without bothering to fashion the raw material into a stone tool “type”. More significantly for archaeologists, most artifacts are often debitage, or byproducts of tool production. For this reason, Australian archaeologists tend to refer to “artifacts” rather than “tools”. Therefore, while archaeologists in Australia analyse stone artifacts according to the same technological variables as elsewhere, the focus is less on typologies or types as a means for describing them (for more detailed information on recording stone artifacts see Hiscock, 1989). The exceptions to this is the early distinction made between the “core tool and scraper tradition” and the “small tool tradition”, which some, but few, archaeologists still use, the “eastern regional sequence”, and “Kartan” tools (see Glossary). The point to remember is that these terms are used heuristically, as convenient descriptive labels, rather than as definitive descriptions of “traditions” or “types”.

The first step to recording a flaked stone artifact in Australia is to recognize one when you see it. Archaeologists classify flaked artifacts according to four basic technological divisions:

- Flakes. The piece of stone that is struck off the core.
- Cores. The piece of stone from which flakes have been removed.
- Retouched flakes. Sometimes people will use a flake as a core and knap it to remove other, smaller flakes from along the edge. These twice-knapped artifacts are called retouched flakes. Using the flake may also create the appearance of retouch, but technically this is use-wear, not retouch.
- Flaked pieces. Artifacts that cannot be clearly identified as a flake, core or retouched flake. This is a category for artifacts which are clearly artifacts but which have lost their defining features, or became detached because the core shattered in the process of knapping.

One local development in Australian archaeology is an emphasis on the analysis of stone artifacts in terms of reduction sequences. Hiscock (1994) argues that, during the mid Holocene, new forms of stoneworking were adopted to reduce risks associated with environmental change, high mobility and the colonization of previously unoccupied landscapes. For more detailed guides to identifying and analyzing flaked stone artifacts in Australia we suggest Holdaway and Stern's (2004) book, *A Record in Stone: The Study of Australia's Flaked Stone Artefacts* and Clarkson and Lamb's (2005) book, *Lithics Down Under: Australian Perspectives in Lithic Reduction, Use and Classification*.

Alice Gorman's Tips for Studying Stone Artifacts in Australia

- You may have heard or read that Australian lithic industries are extremely sparse and unsophisticated; if so, prepare to be surprised!
- What Europeans and Americans call flint is referred to as chert in Australia.
- Quartz is one of the most frequently used raw materials, so brush up on quartz knapping techniques and artifact recognition.
- In the period after European invasion, glass and porcelain were used as raw materials for flaking; however they can be difficult to identify with certainty.
- Pressure flaking is rare and usually only found on Kimberley points.
- Edge-ground axes and grindstones have been collected by individuals and museums since European colonization, so surface remains can be skewed towards flaked stone.
- Don't focus on formal tool types to the detriment of "debitage".
- Read Holdaway and Stern (2004) to get an idea of the commonly used attributes in Australian lithic analysis.
- Avoid the temptation to interpret technology as a chronological indicator, e.g. by assuming that coarse or what appear to be expedient technologies must be earlier. In Australia, they are just as likely to be contemporaneous with microlithic industries or may even be recent.
- Residue analysis is frequently used as a component of lithic analysis, and Australia boasts a few internationally-renowned residue specialists.
- Be aware that local and regional lithic sequences may continue into the very recent past and be linked to contemporary Aboriginal communities.
- Use ethnographic sources and oral history to inform your analysis. Many ethnographies include descriptions of stone artifacts and sites. Aboriginal people often have detailed knowledge of how the landscape was used in the past, and what may have happened at stone artifact sites; the usual cautions about using ethnographic analogy apply.
- Make sure you have relevant permits from the state before recording, collecting or excavating stone artifacts.
- If you are analysing a stone artifact collection, consult with the relevant Aboriginal community about the questions they would like addressed in the analysis and how they would like the artifacts treated at the conclusion of the study.

This could include returning the artifacts to the site, storing them in a Keeping Place, or in a museum.

- Stone tools may have cultural or spiritual significance for Aboriginal communities. This may affect how you record, collect, store and dispose of artifacts, and can only be ascertained by consultation.

6.4. Analyzing Australian Rock Art

Rock art is of great interest to archaeologists because it encodes many levels of social information about the people who made it. It is also very useful for archaeological analyses because, unlike many other artifacts, it is securely tied to place. You can be sure that rock art was made for—and meant for—the place where you find it. The great weakness of rock art studies is that rock art is very difficult to date. While there have been enormous developments in rock art dating over the last decade or so (Cole, 2000; Morwood & Smith, 1994; Rosenfeld & Smith, 1997), the direct dating of rock art is still a job for specialists and requires expensive laboratory processes. The good news is that, should you need this expertise, you can apply for funding for rock art dates from AINSE (the Australian Institute of Nuclear Science and Engineering*) and from AIATSIS (The Australian Institute of Aboriginal and Torres Strait Islander Studies).

In many parts of Australia, rock art appears on surfaces that appear to be inaccessible without the use of scaffolding or ropes. In some regions, Aboriginal people cite the location of paintings in such inaccessible places as proof that the paintings were made by Mimi spirits, rather than people. Overall, however, rock art is restricted in its distribution to regions where suitable rock surfaces occur. There is no rock art in north-east Arnhem Land, for example, because there are no suitable surfaces in this region. In other areas, rock surfaces are unstable and do not preserve art in the long-term.

Despite the promise of its visual allure, rock art is sometimes thought of as a difficult medium for archaeologists to analyze. One of the most useful approaches is that of Morwood (2002), who distinguishes two broad categories of analysis—“descriptive” and “comparative”. Descriptive analyses are those that rely on the figurative component of rock art to directly extract information on past social activities, economy, material culture, ideology and environmental context. This subject identification in rock art can also provide evidence of dating (for example, the depiction of a Macassan prau will date the art to the period of contact with Macassan people). A major challenge to this approach is that all art assemblages have a conventional, stylistic component in representing subjects, and that these conventions may differ from those familiar to the researcher—that is, the subject that is identified by the interpreter may not be the same subject which was encoded by the artist (see, for example, MacIntosh, 1977). As Maynard (1977:86) points out, meaning is always “highly specific and usually esoteric” and, as such, is “probably completely intractable”. Clegg (1979) extends this position to argue

against any attempt to construct the original meaning of motifs. To signal this position he developed the typographic convention of an exclamation mark before his categorisations of motifs. He refers to !fish, !tracks and so forth. While Clegg's convention has been used on occasion by a number of other researchers (e.g. Franklin, 1984; Layton, 1992), it is not generally followed by Australian rock art researchers, though his basic point is fundamental to the way in which rock art research is conducted in Australia.

The second way that Morwood advocates for analyzing rock art is comparative analyses—the same means that are widely used on many types of archaeological evidence, such as stone artifacts and faunal remains. Comparative analyses are based upon explaining bias or selectivity in the content or structure of archaeological assemblages in terms of ideology, function, discard patterns, taphonomy, and so on (see Morwood, 2002). Selectivity can be demonstrated at many levels in rock art assemblages, and identified through analysis of the chronological and geographic distribution of motifs. Other factors that can be analyzed meaningfully include: the manner in which the boundaries between style zones are demarcated; the distribution of motifs between and within sites; the choice of subjects; and the choice of media and cultural contexts. The important point here is that these kinds of analyses can be applied to any rock art body: while the content may change, the material remains open to analysis through standard archaeological methods.

6.5. What to Do if Human Remains are Encountered

Treatment of the dead by Aboriginal people around Australia varied widely and not all bodies were “buried” in the sense that is familiar to Europeans. Burials did occur, of course, and may be found in a wide range of contexts, from coastal, inland or desert sand dunes, to middens, earth mounds, rock shelters, caves, or clay lunettes on lake margins (Thorne & Ross, 1986:9–10). Sometimes graves were specially marked (e.g. with boughs placed on top of the grave, or by carving nearby trees), mostly they were not. Other practices included cremation, placing the body in the limbs of a tree, or raised above the ground on a stick platform, placing the bones in specially made burial logs (*lorrkorns*), or even in clefts in rocks. Many practices were compound ones, i.e. the completed ritual of burial consisted of more than one of these stages. For this reason it is possible that you might encounter an Indigenous burial during fieldwork. If you do encounter human remains during excavation or survey (this is possible if Indigenous burials are actively eroding), it is imperative that work ceases immediately until a positive identification of the remains (first, as definitely human—you would be surprised at how many kangaroo bones are initially misidentified—and second, as Indigenous) can be made.

Under no circumstances should you remove the remains or interfere with the surrounding soil matrix in which they occur.

In some cases it may be possible to determine whether or not the remains are Indigenous by a careful, but non-intrusive, examination of the grave and any associated features.

Identifying Indigenous Burials

The Skeleton Manual (Thorne & Ross, 1986:32–33) sets out some criteria for identifying whether or not a burial might be Indigenous:

- Is the grave small, shallow and/or oval in shape?
- Is the grave outlined by salts from contact with local ground water (indicating that it may be very old)?
- Has it been dug into hard deposits but without any evidence for metal tools having been used?
- Is it associated with other Indigenous cultural material (such as stone artifacts, ochre, animal bones or shell)?
- Does the burial occur within an ancient landscape or is it associated with a known Indigenous burial site?
- Does the grave contain bones from more than one individual?
- Are the bones in a flexed position (i.e. are the legs drawn up to the abdomen or chest, or are the arms folded against or across the chest)?
- Have the bones been made into a relatively small bundle (i.e. are the legs, arms and torso very close together)?
- Are the bones hard and mineralized, encrusted with carbonate or other salts, or discolored from long contact with the soil?

Answering yes to any of these questions may mean that the burial is Indigenous.

If your answer is still inconclusive, however, you will need the help of a physical anthropologist to examine the bones. Remember that, if the bones are Indigenous, they will be protected by legislation and if the burial is recent it will immediately become a police matter. *Either way, any unauthorized disturbance of the skeletal remains or the burial will be illegal.* If the remains need further identification you should contact the police and the relevant government authority for Indigenous heritage matters immediately.

6.6. Place-Based Approaches to Recording Indigenous Heritage

Most archaeologists working in Indigenous archaeology in Australia no longer draw a hard and fast division between pre-contact (“prehistoric”) and post-contact (“historical”) heritage. This is part of a recognition that Indigenous heritage does not just belong to the period before 1788, and that a culture that post-dates contact is just as “real” and authentic (albeit different) as what came before (e.g. Byrne & Nugent, 2004; Harrison, 2004).

There is a growing recognition in Australia that Aboriginal cultural heritage must be understood within a wider cultural landscape made up, not just of the places themselves, but also of the web of interconnections between them. The

geographical mapping of intangible heritage (travel pathways, daily rounds, memories) is recorded through a variety of means, but particularly through oral histories (Byrne et al., 2001; Byrne & Nugent, 2004). This aims to do two things:

- Recognize Indigenous heritage as intrinsically connected to the landscape—not so much to the event, the activity, or the individual site, but to the total landscape which gives meaning and form to these events.
- Create a more culturally-responsible framework in which to understand sites. By moving away from an idea of sites as discrete and bounded entities, it is possible to trace the interconnections between places and the many intangible aspects of heritage that are still imprinted on the landscape through people's experiences, emotions and memories. "It is the landscapes themselves that ought to be considered heritage, rather than discrete and dispersed "sites" within them." (Byrne & Nugent, 2004:73).

Indigenous Australians conceive of space in terms of the inter-relationships that exist between places and peoples, as established by ancestral beings during the Dreaming era (for more information see Chapter 2). Morphy (1998:108) argues that:

The whole of creation, all of human life, is mapped on the landscape, to which ancestral beings are inextricably connected. Almost anything that exists has its place in the Dreamtime, whether it is an animal...an object...a ritual practice...or even an illness. And everything that has a place in the Dreamtime is likely to have a place associated with it on earth.

The intricate interconnections between the Dreaming and the present, between the ancestors and living people, have far reaching implications for what Indigenous people consider to be a "site". For Indigenous Australians, the land is the creation of the ancestral beings who, in their journeys across it, produced the various features of the landscape and left behind them songs and story cycles, sacred objects and practices that commemorate their creative acts. The physical places associated with these acts continue to represent important aspects of traditional life and act as vital reference points for delineating group territory and governing people's movements. This means that Indigenous people may give relatively similar significance to recent sites and to sites of great antiquity. Equally, a site does not need to contain physical traces (i.e. artifacts) for it to be considered significant by Indigenous people. Indeed, while ceremonies and rituals were vital to the process of constructing place (David & Wilson, 2002:30), there will not necessarily be long-term material traces of this significance. Additionally, in some situations Aboriginal people may be unwilling to advise on management strategies for a particular place, as any changes at that site may well be seen to flow on to other, linked places. Even if these linked sites are well outside of the development area, you will need to be aware that it is as much the dreaming connections between places that are likely to be affected by development as the places themselves.

Finally, the increased emphasis on place-based approaches to recording Indigenous heritage has led to greater emphasis on the social significance of shared

landscapes (e.g. Byrne et al., 2001; Harrison, 2004) and, to some extent, on the social interpretations of the past (see David et al., 2006). Articulating with contemporary discussions of materiality and drawing upon both Aboriginal and settler conceptions of place, this approach uses the idea of landscape as a conceptual tool to analyze relationships between people and place. Shared landscapes are much more than the sum of their physical places. Of equal interest are the spaces between places and how these are given meaning by different groups of people, as well as how memories are woven around both. The different, but inter-locking, understandings of this shared heritage can form a basis for reconciliation between Indigenous and settler Australians.

6.7. Contact Archaeology and the Post-Colonial Past

Australian archaeologists normally use the term “contact archaeology” to refer to the archaeology of the recent Indigenous past (e.g. Birmingham, 1992; Harrison & Williamson, 2004). It is sometimes referred to as “the historical archaeology of Indigenous peoples” (e.g. Murray, 2004; Rubertone, 2000), “contact” or “culture-contact” (e.g. Murray, 1996; Paterson, 2003; Silliman, 2005); or the archaeology of “cross-cultural engagements” (e.g. Clarke & Paterson, 2003; Smith & Beck, 2003; Torrence & Clarke, 2000). This recent development in disciplinary interest merges the intellectual interests of both historical and Indigenous archaeology. A focus here is how Indigenous Australians have incorporated change into their social and cultural systems. The issue of contact between Indigenous peoples and colonial settler societies is of particular interest to those concerned with the dynamics of social change, since these situations have the potential to produce accelerated and profound change, (cf. Giddens, 1979:228).

While there is increasing interest in the historical archaeology of Indigenous peoples in other parts of the world, in Australia its development is particularly vigorous. This may be because of a particularly Australian situation, in which archaeologists are routinely responsive to the research agendas and interests of Indigenous peoples, and are often called upon to develop skills in both historical and Indigenous archaeology. This can be contrasted to the situation in North America, for example, where Indigenous people have less overt power over Indigenous archaeological practice and where there is a more clearly delineated disciplinary divide between historical and Indigenous archaeology (Lightfoot, 1995; Rubertone, 2000; but see Graham, 1998). It could be argued that the rigidity or fluidity of disciplinary divides has shaped how the historical archaeology of Indigenous peoples has developed in these different regions. Moreover, it may be that the level of interest in the historical archaeology of Indigenous peoples is a measure of the relative empowerment of Indigenous peoples in different parts of the world.

Until recently the archaeological potential of contact sites was vastly underrated, because there was an often implicit assumption that Indigenous behavior since contact was not “traditional”, or that Indigenous ways of life in the recent past were not intrinsically interesting. In part this may be because it can be very difficult to

identify a contact site in the first place. If a scarred tree has the marks of a steel axe used to obtain bark for a traditional Indigenous container, is this a contact site? In a sense it is, but this is not usually what we mean. Normally, a contact site is defined as one with evidence for the Indigenous adaptation of materials or technology that were introduced to Australia by another people, usually the British. Thus, a site containing flaked glass would be considered to be a contact site, as would one that showed evidence of the re-use of iron or railway sleepers. Ironically, we do not consider a place where Europeans used Indigenous technology or materials to be a contact site, indicating how Eurocentric our ideas still are. As this implies, contact sites are to do with understanding Indigenous ways of thinking and living, rather than understanding the groups with whom Indigenous people came into contact. Because contact was a dynamic and often devastating process, it can be archaeologically visible in many ways, such as:

- Through the incorporation of European materials into Indigenous sites and activities.
- Through changing patterns of Indigenous occupation, such as the growth of fringe camps on pastoral stations or around townships.
- Through Indigenous people's participation in European industries, such as mining and pastoralism.
- Through the activities of European institutions in which Aboriginal people were placed, such as missions and orphanages.
- Through other European attempts at control, such as encouraging Aboriginal people to live on reserves and in communities.

6.8. Researching Indigenous Sites

6.8.1. *Undertaking Ethnohistoric Research*

Ethnohistoric research is an important part of most Indigenous archaeological projects and will form a part of the literature review for any good Indigenous consultancy report. Ethnography is the study of living peoples, ethnohistoric research uses historical accounts of Indigenous people written by Europeans in the early contact period to reconstruct what Indigenous culture in this period may have been like. Ethnohistoric sources can provide information on how people were moving through the landscape or using particular areas, what plant and animal resources they relied on (and, from this, where sites might be located), their language, beliefs, diet, ceremonies, dwellings, hunting techniques, and what objects they made or traded with other groups. Sources of information include explorers' journals, official reports, settlers' diaries, letters or reminiscences, accounts of early anthropologists, and any other early record left by those who came into contact with Indigenous people. You can find this material in any major or state library, even in local historical society collections and public libraries, and the Australian Institute of Aboriginal and Torres Strait Islander Studies has an excellent collection linked to MURA, their searchable on-line database.

Archaeologists use ethnohistoric sources to reconstruct in some measure the post-contact cultural environments of Indigenous peoples. There are obvious problems with this, however, most notably that these sources have the same inherent problems as all written documents. They were written by a particular person for a particular purpose, and will tend to include only the information that the observer thought was relevant at the time. The cultural barriers between Europeans and Indigenous people also affected the accuracy of their ethnographic observations—many accounts contain descriptive or other incidental observations of a culture which the Europeans did not understand and may have had little sympathy for (Byrne, 1997). There is also an expectation that the earlier the account, the more closely it will resemble the pre-contact “truth” of how Indigenous people actually lived, but you must bear in mind that by the time even the earliest accounts were written, European observers were already witnessing a society radically changed by the contact process. Because of the extremely complex social networks linking Indigenous people throughout Australia, many groups already had access to European goods through their trading networks long before they first saw a white person. When Ludwig Leichhardt first travelled through north Queensland in 1845, for instance, some 20 years before the first settlers colonized this part of Australia, he mentioned seeing European artifacts in abandoned Indigenous camps. Another problem with the use of ethnohistoric sources is that many observations were made of small groups of people undertaking specific, often highly-seasonal, tasks, and do not reflect the broader range of activities of the larger Indigenous group.

Finally, while ethnohistoric accounts are invaluable for the insights they can provide into the immediate post-contact period, they are also tightly restricted in time and space, and cannot be applied to geographically separate groups of people, or to people inhabiting the same area in even the recent, let alone the distant, pre-contact past.

6.8.2. Sources of Ethnohistoric and Other Information

The premier source for information on Aboriginal and Torres Strait Islander groups throughout Australia is the library of the Australian Institute of Aboriginal and Torres Strait Islander Studies in Canberra. The AIATSIS Library holds the world’s largest collection of materials relating to Aboriginal and Torres Strait Islander cultures, many of which were collected by early anthropologists and observers from the late nineteenth and early twentieth centuries onwards. Materials include manuscripts, serials, language materials, books, rare books, and the records of organizations, art catalogs, newspapers and newspaper clippings, maps, posters and kits, microforms and CD ROMS. Films, videos, sound recordings and photographs are held in the Audio Visual Archives of AIATSIS. Not all materials will be available to the public—some are secret and have restricted access only—but the catalog will clearly flag when this is the case.

Other consultancy/research reports held by government departments may also hold relevant material that can help you with fieldwork. All state government departments responsible for administering cultural heritage legislation will maintain

some form of library of previous reports and recorded sites. The quality of information contained in these sources will vary, but this kind of unpublished material won't be available anywhere else. Most departments will let you look at reports prepared by previous consultants or researchers free of charge, and many will also print off maps or generate a list of known sites for your area. Bear in mind that you may need the permission of the relevant Indigenous community to access this information, however, and that there may be a service charge to instigate and print the results of a database search. Find out about this in advance. Some government departments have official application forms for accessing their information that you can print from their web sites. Obviously these forms will contain clear information about fees and any other authorizations you will need.

For diaries, letters and explorer's journals, try the major state libraries; for government records on Indigenous peoples, try the state and federal archives. If there was a mission in your study area, try and track down the records from it, which may still be contained in church archives if not already gifted to a public archive, such as the National Library* (for more information on accessing library and archival resources, see Chapter 7). Local histories often contain a wealth of handed-down information—usually collected through informal oral histories—that may not be available in other sources, although you will always have to be wary of the veracity of this data and not take it automatically at face value (for more advice on using and accessing these kinds of sources, see Chapter 7).

Last but not least: go to the relevant land council or Aboriginal corporation and introduce yourself. The Aboriginal community will always be the best place to find out local knowledge, but they won't tell you until they feel they can trust you. Even so, there will be lots of things they will never tell you—learn to live with this (for more information about interviewing Aboriginal people and contacting Aboriginal communities, see below).

6.9. Ethical Issues in Indigenous Archaeology

The main foundation for good ethical practice in archaeology is a respect for other people's cultural traditions. This means that your opinions and attitudes may need to be tempered by other worldviews that are not necessarily compatible with the scientific dictates of archaeology. While this does not mean that you must subject yourself to unreasonable demands, working with Indigenous communities will routinely require that you behave appropriately. This can take a number of forms: from not appearing in clothing which may be deemed offensive, to not visiting restricted areas or sites, or not pressuring people to accept your opinion or to answer your questions.

One of the main areas of ethical responsibility is in the use of information provided by Indigenous consultants: in Indigenous systems knowledge is not "open" in the sense that all people have an equal right to it. Access to this knowledge is a source of power, and must be controlled by people with the appropriate qualifications (usually based on age seniority). In terms of archaeological fieldwork, this

means it is essential that you obtain your information from the correct people, i.e. the people who hold the appropriate knowledge of those sites. Bear in mind that, even if you are working on historical sites, you may still need to consult with the senior custodians on whose land the sites are located.

Good ethical practice also means that you have a commensurate responsibility to ensure that the information is used correctly. What a scientist may view dispassionately as “data”, a senior custodian may view as highly-sensitive secret/sacred information. If Indigenous people impart restricted information to you, it then becomes your responsibility to ensure it is not seen or heard by an inappropriate audience. Maintaining continuing consultation is a long-term (but often unforeseen) aspect of a working relationship, particularly when it comes to the publication of your results. If you intend to publish your fieldwork, you should return to the community to show them what it is you wish to publish and how you will present the information, and ask them for permission to publish. It is your duty to make sure that the publication does not contain information or images that the senior custodians require to be kept restricted. Permission is not given forever, and you will probably need to get separate permission each time you wish to publish. If your fieldwork involves artifact collection or excavation, you may also be required to return the material to the Indigenous community after the completion of fieldwork.

6.9.1. Contacting Indigenous Communities

Correct and adequate consultation with Indigenous communities and custodians is one of the main ethical responsibilities of anyone working with Indigenous cultural heritage. In many states this is mandatory practice, and is “policed” in a sense by the various government departments that administer cultural heritage legislation. In Queensland, for example, proper consultation must be demonstrated before you will be granted a survey permit to even look for sites, and Indigenous permission must be obtained to view archaeological reports in the government database (including reports on historical archaeological sites). In all states adequate consultation is an essential prerequisite for obtaining a permit to excavate an Indigenous site (and in some instances, also, historical sites) (see Chapter 5). No fieldwork on Indigenous sites in Australia should be conducted without proper consultation. Initially you will need to establish who the correct custodians are for your study area, although the point of initial contact will be different in different parts of Australia. In New South Wales, for example, there is a well developed system of Aboriginal Land Councils, headed by the state-wide NSW Aboriginal Land Council*, and including thirteen Regional Aboriginal Land Councils, and over one hundred Local Aboriginal Land Councils. In South Australia, on the other hand, you will need to seek advice from the Department of Aboriginal Affairs and Reconciliation, who will advise you of the appropriate Aboriginal group to contact. *Ask First: A Guide to Respecting Indigenous Heritage Places and Values*, a booklet produced by the Australian Heritage Commission and available on the web (<http://www.ahc.gov.au/infores/publications/indigenousheritage/index.html#pdf>),

outlines the steps involved in best-practice for contacting and consulting with Indigenous communities throughout Australia, as well as containing tips on how to resolve conflict.

It is not enough to consult with any Indigenous person. You need to make sure you have consulted with the correct people who are acknowledged as the proper custodians for their country. Because this can sometimes be a long and complex process, you should start consultation as soon as possible and not leave it to the last minute. Indigenous people will not necessarily wish to work to your time schedule and you may need to alter your plans to accommodate their wishes. Wherever possible you should also try to include Indigenous people as part of the fieldwork team—even if it is only to invite the senior custodians to visit and observe what you're doing in the field. Bear in mind that any such involvement of Indigenous people will require appropriate payments for their time, even if they have only participated in an interview. Although the recommended fee will vary from organization to organization (many Aboriginal Land Councils have set their own schedules of fees according to age and seniority), you can budget for at least \$25/hour or \$300 per day. Also, remember that working with you is only one part of their lives and that they will have other things they want or need to do and obligations they have to fulfil. You should be prepared to work around these.

Katrina Stankowski's Tips for Taking Indigenous People into the Field

- When you are visiting sites with community members, Local Aboriginal Land Council (LALC) sites officers, or Elders, it is courtesy to provide lunch for all. Remember that these people are giving up their time to come and help you out. Buy a cheap esky and a bag of ice and pack it with bread rolls, salads, drinks and other items. Don't forget the utensils, salt, pepper, paper plates, cups, napkins and a rubbish bag!
- If you are providing lunch for Elders don't forget that some of them might have to watch their sugar intake, so make sure you bring a selection of fruit, orange juice and other low sugar items just in case.
- If you are taking community members out into the field to visit sites, remember you are responsible for them. Consider your options and plan accordingly—will you need a four wheel drive? How far will you be going off track? How far can people walk? Do you have a plan if you break down? Will you need a two-way radio if there is no mobile phone reception? Do you have a first aid certificate if something should happen to someone travelling with you? Have you made sure that everyone is in good health and doesn't have to stay within a certain distance of a hospital? And remember to drive carefully!

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In most states access to non-confidential Indigenous material (whether photographic, artifactual or documentary) held in government collections (such as the Australian Museum*, or the Australian Institute of Aboriginal and Torres Strait Islander Studies) can only be obtained with written approval from the custodians of the region under study. If you are affiliated to a university, all research to do with Indigenous Australians (i.e. that has the words “Aboriginal” or “Torres Strait Islander” in the project outline) may have to be approved by the university’s ethics committee. The thinking behind this procedure is that all research on Indigenous peoples will impact upon them, even if the non-Indigenous people conducting the research cannot foresee that impact themselves. Riley-Mundine (1988:13, emphasis in original) argues that Indigenous people should have control of, or at the very least involvement in, all research that involves them: “Aboriginal people, *as people*, surely have the right to be involved in what is said about them, how it is said and what research is carried out.”

The Code of Ethics of the Australian Archaeological Association recognizes the importance of cultural heritage to Indigenous communities and encourages archaeologists to work in close collaboration with Indigenous people at all times. If you are undertaking a project that involves Indigenous sites it is essential that you contact local Indigenous people during the early stages, while there is still a chance to shape the research so that it fulfils both your needs and theirs. As stated in Section 1.2 of the Foreword to the AAA Code of Ethics, it is essential that you obtain the informed consent of representatives of the communities whose cultural heritage is the subject of investigation. Moreover, you cannot assume that there is no community of concern, even if one is difficult to find. Australian archaeologists do not recognize any occasion for which there are no appropriate Aboriginal or Torres Strait Islander people to contact.

6.9.2. *Applying to Work on Indigenous Lands*

In a very real sense, all of Australia is Aboriginal or Torres Strait Islander land. However, from a researcher’s point of view there is a big difference between working with Aboriginal people on Crown lands or private lands, and working with Aboriginal people on Aboriginal lands that can only be entered if you have a permit.

Obtaining permission to conduct research in Aboriginal communities is not a simple matter, and the protocols can vary greatly from state to state. Some regions of Australia, especially in the Northern Territory and Western Australia, have been designated as Aboriginal Lands Trusts, and can only be entered with a permit. It is at this point of entry that Aboriginal people have direct control over researchers. In these cases, permission for fieldwork must be obtained directly from Aboriginal groups and organizations. Often, this means that the researcher has to negotiate with many levels of authority, all of which are composed of Aboriginal people. For example, to work in the Barunga region of the Northern Territory it is necessary to get a permit from the Northern Land Council*, which takes its advice from

the permit delegate for that community, who in turn seeks permission from the traditional owner. Apart from these three levels of power, it is also important to consult with the President of the Barunga Community Government Council, and the Jawoyn Association. Also don't forget that people on the ground can influence all of these levels of power, so it is wise to get on with everyone as much as you can. The intricacies of the process and the time it takes to get a permit to conduct research on Aboriginal lands is something that empowers Aboriginal people, since it demonstrates to the researcher the fact that he or she does not have an intrinsic or irrevocable right of residence. The process of renewing permits is an annual reminder of Indigenous rights over Indigenous lands.

6.9.3. Interviewing Indigenous People

The methods used to record Indigenous histories are comparable to those used to record any oral histories. In dealing with Indigenous people or communities, there are several specifics that you should bear in mind:

- Be aware that Indigenous people often think it is rude to ask direct questions. Therefore they are likely to be under more stress than non-Indigenous people when a formal interview is being conducted.
- It is important to leave room for Indigenous people to shape the interview process themselves. One way of doing this is to allow people to go off on tangents, talking about the things that are important to them (but which may not be of immediate importance to you). Often, this will deepen the quality of the interview. Moreover, it is part of establishing trust between the interviewer and the person being interviewed.
- If people avoid answering a question, it is usually because it is not something they wish to answer. Don't harass them, and take constant note of their body language as this will give you a clue as to how comfortable they are feeling during the interview.
- Sometimes people may know the answer but will not have a right to speak on that particular topic. In this case, they may direct you to the person who does have a right to speak, by saying "Ask Joe" or "Mary might know about that". This is not a refusal to help you, but Indigenous protocol for dealing with information in a system of restricted knowledge.

At the end of the interview you must ask the interviewee for their permission before you reproduce any part of it, or make it available in any kind of public document. This process is called "informed consent". When obtaining informed consent you need to give an outline of your project and make sure people understand that their participation is voluntary and that they can change their mind about participating at any time. Sometimes you may need to obtain a signed consent form from your interviewees. This will be essential if you are seeking funding for Indigenous research from bodies such as AIATSIS.

It is also important that you minimize any potential harm to participants. This includes physical harm, subjecting people to undue stress, or undermining their

self-esteem. While archaeology seems pretty innocuous on the surface, our job is actually writing the story of other people's pasts and some of these stories have the potential to hurt people. For example, in the past, some archaeological research has been used to support racist stereotypes of Indigenous people. You need to ask yourself what kinds of precautions have been taken to keep risk at a minimum: does your study involve particularly vulnerable subjects who may require special consideration?

Finally, if you are interviewing people you will need to give them the option of being anonymous and you may need to take special measures to ensure their privacy. This is particularly so if you are working with Indigenous people, who are often very cautious about how they will be portrayed by researchers. Some Indigenous groups will not consent to research being undertaken unless they have a certain amount of control over the process and the publications that will arise from the research. If you wish to make use of any information collected during an interview you will need the informed consent of the participants (and possibly also their descendants) before you can display or publish images or quotations or make data public in any way (for more information, see "Obtaining Permission to Publish" in Chapter 10).

Kirsten Brett's Advice for Single Women Working in Aboriginal Communities

- Don't restrict what you do only to your own research. The community has their own agendas and fieldwork is going to be affected by what is happening in the community, e.g. fights, deaths, no power or water, ceremonies, too hot, too cold, floods!
- Respect the community's wishes, respect the traditional owners and custodians, respect the Elders.
- Become close to some local women whom you can gossip and laugh with, and who will offer you their advice and protection. Go to them if you feel insecure, and give them opportunities to tell you local news.
- Take photos of your family and where you live to show to people. This will help you to develop relationships with them and allow them to place you in a social context.
- Share parts of your culture with the people you develop relationships with, so it's a learning experience both ways.
- Be happy to share what you have, but also set your boundaries so you can have "time out". Say "no" when you need to.
- Be guided by local people on how to dress and act in a culturally appropriate manner.
- Be yourself; people are very accepting and the worst that can happen is that you provide some entertainment or gossip.
- Have a sense of humor.
- If you are unsure about something, ask a local person who you have a relationship with.

- A support network is good to have, whether it be someone you can call on the phone who has had similar experiences, or a fellow worker whom you can talk to and debrief with.
- Don't be on a fixed time schedule. Be flexible.
- Be open-minded and don't judge people. It is a different culture that you won't ever fully understand, with social issues like any other society.
- Being adopted into kinship networks provides you with the privilege of having set relationships with the people in the community. Get to know the kinship system and remember who you should and shouldn't be talking to and how to act in various relationships.
- Don't run over any dogs. They are like family and related to people through the kinship system.
- Be careful when talking to males who are your straight skin (acceptable marriage partners according to the rules of the kinship network). Stories will start. After all, everyone wants to see you married off.
- A well-timed visit from a boyfriend/male friend/partner can help if you are having difficulties with unwanted attention from a male straight skin in the community.

Kirsten Brett has been working with the Beswick and Barunga communities of the Northern Territory since 1998 on the development of relevant cultural education materials for the empowerment of the community.

6.9.4. Seeking Indigenous Support for Archaeological Research

One of the most important features of Indigenous studies in Australia is the level of Indigenous control over research that is exerted via institutions. Many institutions seek written proof of community support for research on Indigenous subjects, including university ethics committees, museums, government departments and funding bodies. In all Australian states, Indigenous permission is needed for a permit to excavate Indigenous sites or to conduct research on human remains still held in museums (although there are active repatriation programs in all major museums).

6.9.4.1. Museums

Procedures will vary according to the material the researcher wishes to access. While it is a relatively straightforward process for a researcher to gain access to secular objects, such as barks paintings, secret-sacred materials are kept in special repositories and cannot be accessed, even by museum staff, without permission from Aboriginal Elders. At the South Australian Museum, for example:

For sensitive areas of the collection, i.e. parts involving burials, ceremonial material, access to human biology records etc., the researcher must provide evidence of their consultation efforts with relevant communities (i.e. Indigenous Australians, Maoris, Papua New Guineans

etc.). Without them demonstrating that they have gained at least some community support for their project, access will be declined.

For access to less problematic parts of the collection, we consider that most researchers who are already established in their field (or are at least externally supervised by someone who is) do not pose a risk to the Museum's collections or to cultural sensitivities in general... When the situation is unclear I have even insisted that researchers approach state Aboriginal heritage committees and university ethics committees to demonstrate beyond any doubt that the intended research with our collections is not going to cause alarm in any quarters. Of course, access by people involved in court matters can legally truncate some of our demands (Philip Clarke, Head of Anthropology/Manager of Sciences, South Australian Museum, email communication, January 24th, 2005).

The repatriation of human remains and sacred objects is a topic that directly affects many Australian museums, as well as those overseas. While Aboriginal people objected to the exhumation and collection of human remains, even in the nineteenth century, in the twentieth century human remains were still taken without their permission or knowledge (e.g. May et al., 2005). While there were occasional requests for the return of remains, it was not until the 1970s that Aboriginal groups initiated organized lobbying seeking support for the return of human remains to Indigenous Australian communities. Significant developments since then include the development of museum policy and state legislation regarding the repatriation of human remains and sacred objects, and the return of a significant number of collections. Important milestones in this process include the return of Truganini's remains (in 1976), the Crowther Collection (1985) and other Tasmanian remains (1988) from the Tasmanian Museum and Art Gallery; the return of the Murray Black Collection from the Department of Anatomy of the University of Melbourne in the mid 1980s; the return of the ancient remains from Kow Swamp in 1990 and the return of Mungo Lady in 1992 (see Fforde & Ormond Parker, 2004). The situation today is that communities normally receive human remains when they request them. However, sometimes communities ask museums to continue to hold those remains until the community has dealt with the myriad difficulties involved in determining what constitutes proper care for these people when they are returned. This is an emotive topic, one which highlights different cultural values and understandings of "correct" behavior. That Indigenous Australians have different notions of what is "dead" or "alive" is apparent in the following comment from Kamilaroi man, Bob Weatherall, who has been active in the repatriation process in Australia:

We don't see them as being dead. We see them as being on their journey into the spirit world. That is not a dead world; that is a world where all people go, where the spirit and souls go (*The Guardian* Sunday, 4th May, 2003).

This is an area that requires expert knowledge of Indigenous Australian protocols. Our advice to any scholars who wish to work in this complex and highly sensitive area (and Indigenous Australians often wish scholars to work with them) is that they should be particularly careful to follow the advice given to them by the Indigenous

people with whom they are working. If in any doubt, seek advice from others with experience in the field.

At an international level, Indigenous Australians have been active participants in the global process by which Indigenous communities have made requests for the return of ancestral remains. While the remains of around 750 Indigenous Australians have been returned from museums and institutions abroad, another 8,000 are still held overseas. For Indigenous Australians, the focus of attention so far has been on the United Kingdom, since many remains were exhumed as one aspect of British colonial practices. In the UK some museums and holding institutions have repatriated remains to Australia, some have narrow criteria for allowing the return of remains, some have policies that oppose repatriation, and others have no written policies at all (Fforde & Ormond Parker, 2004). Institutions in the United States, however, are also likely to hold significant collections of Indigenous Australian human remains (see, for example, May et al., 2005), and attention is likely to turn in this direction in the near future.

6.9.4.2. Funding

Another important way in which Indigenous Australians exert control over research is through the approval policies of funding bodies. In Australia, the major bodies that fund research into Indigenous subjects are the Australian Research Council (ARC), the National Health and Medical Research Council* (NHMRC) and the Australian Institute of Aboriginal and Torres Strait Islander Studies (for more information on funding bodies and applying for funding in Australia, see Chapter 3). A normal condition of funding is that researchers abide by the ethical guidelines of the funding body. The NHMRC guidelines review several different models that have successfully integrated the building of trust and recognition of cultural values and principles with advancing the objectives of the research enterprise, pointing out that a common feature across these models is the explicit recognition and commitment to respect for Aboriginal and Torres Strait Islander cultural values and principles (NHMRC, 2003:6). The Australian Archaeological Association recognizes and endorses the *AIATSIS Guidelines for Ethical Research in Indigenous Studies*, which explicitly state that funding is contingent upon community support for the project:

1.8 Informed consent, community support, and ethical clearance

Refer to the *AIATSIS Guidelines for Ethical Research in Indigenous Studies* document, and the Ethical clearance checklist and Part 3 (Questions 9 to 11) of the *AIATSIS Application Form*. Applicants must provide evidence of community consent and support for their research project, and consider issues of private, personal, or cultural information. *Failure to supply evidence of Aboriginal or Torres Strait Islander support may jeopardise the applicant's chances of being awarded a grant* (AIATSIS, 2005, emphasis added).

Measures such as these are used by a wide range of funding institutions, giving a message that the fundamental criterion for ethical archaeological research is the “informed consent” of Indigenous people, so that they are fully aware of the

implications, costs and benefits of the research and support the research. This can be challenging, especially when viewed through the lens of a North American “scientific freedom” approach to scholarly endeavor.

6.9.4.3. University Ethics Processes

Dealing with Indigenous issues is one of the most sensitive and complex tasks facing students, teachers and researchers in universities. This involves dealing with substantively different values, notions of cultural and intellectual property and what constitutes culturally appropriate behavior. It is an area fraught with potential pitfalls, one that cries out for sensitive and thoughtful guidance. Yet, while many universities have made reconciliation statements as part of an Australia wide process of promoting reconciliation between Indigenous Australians and the wider community¹, not all university ethics guidelines make a clear distinction between research in the humanities and social sciences that involves human subjects and research in these areas that impacts upon Indigenous people. One outcome of this lack of guidance is that, even today, good people can make bad decisions, damaging both themselves and the Indigenous people they work with:

That ‘people of good will’ do embark on such projects (in the ‘free spirit of intellectual enquiry’, sometimes ‘with the best of intentions’ and possibly with clear intent to circumvent the ‘difficulties’ involved in dealing with time scales and priorities which are different from their own) without formal peer/institutional ethical review and (where appropriate) impacted-or partner-community validation is equally unacceptable. But it happens (Rigney & Worby, 2005:378).

Taylor (1993) characterizes the failure to address substantively different cultural values as “difference blindness”, part of a process that involves the de facto imposition of one system of values upon another. This point is made in the National Health and Research Council’s *Guidelines for Ethical Conduct*:

The construction of ethical relationships between Aboriginal and Torres Strait Islander Peoples on the one hand and the research community on the other must take into account the principles and values of Aboriginal and Torres Strait Islander cultures . . . In the research context, to ignore the reality of inter-cultural difference is to live with outdated notions of scientific investigation. It is also likely to hamper the conduct of research, and limit the capacity of research to improve human development and wellbeing. Contemporary writing about science recognises this . . . Research cannot be ‘difference-blind’ (NHMRC, 2003:3–4).

While the NHMRC is concerned specifically with medical research, there are implications for other areas of Indigenous study—and there are moves afoot to produce change. One recent idea with far-reaching implications involves a charter of Indigenous research as a way of committing universities to best negotiated practice in the giving and receiving of knowledge (Rigney & Worby, 2005). As it stands,

¹ The Australian Commonwealth Government established the *Council for Aboriginal Reconciliation Act 1991*.

there is quite a lot of variation amongst Australian universities. The Ethics Committee at Flinders University, for example, seeks advice from the Yungorendi First Nations Centre before it gives approval for a research project involving Indigenous people or cultural materials, and would normally expect a letter of support from the Indigenous community involved in the research. However, not all universities insist their students and staff fully address the ethical implications of research in Indigenous topics, or with Indigenous peoples. In these cases, scholars should take their guidance from the ethical codes developed by AIATSIS, the NHMRC and AAA. In our view, the researcher is well advised to take the higher moral ground, rather than the lower.

Ken Isaacson's Tips for Working with Aboriginal People: Respect, Rights and Responsibility

- Make sure you talk to the appropriate Elders. You can do this through contacting Aboriginal Land Councils before you go, and getting further advice when you are in the local area.
- Recognize the authority of Elders. Be guided by them in all of your interactions with their communities.
- Thank the Elders for allowing you to visit their land and talk to them.
- When you are in a community, you might find out that the site you want to visit is on someone else's land. If this happens, ask the Elder who has been helping you who you should approach to get permission to visit that site or land.
- Intellectual property is a big issue here in Australia. You need to recognize Aboriginal Australian intellectual property rights, and deal with these fairly. For example, if you want to publish photos, you should seek permission from the appropriate Elders, Board of Elders, and/or the Aboriginal Heritage Committee for that community. When the photos are published, you have a responsibility to acknowledge these Elders and their communities in your article and to make sure they get some financial payment for the use of these images.
- Share the benefits. If you are drawing upon Aboriginal knowledge for your work, you have a responsibility to work out ways in which you can share the benefits of your research with Aboriginal people.
- Take note of the World Archaeological Congress (WAC) guidelines relating to archaeology and Indigenous peoples, especially the First Code of Ethics and the Tamaki Makau-rau Accord on the Display of Human Remains and Sacred Objects (Appendix 2).
- Show respect.

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References and Further Reading

- Australian Government Attorney General's Department (2005). *Stopping the rip offs*. http://www.ag.gov.au/agd/WWW/securitylawHome.nsf/Page/Publications_Intellectual_Property_Stopping_the_Rip_Offs_Report.
- Australian Institute for Aboriginal and Torres Strait Islander Studies (2005). *Guidelines for ethical research in Indigenous studies*. Canberra: AIATSIS.
- Birmingham, J. (1992). *Wybalenna: The archaeology of cultural accommodation in nineteenth century Tasmania*. Sydney: Australian Society for Historical Archaeology.
- Byrne, D. (Ed.) (1997). Standards manual for archaeological practice in Aboriginal heritage management. *Aboriginal Cultural Heritage: Standards and Guidelines Kit*. Sydney: NSW NPWS.
- Byrne, D., Brayshaw, H., & Ireland, T. (2001). *Social significance. A discussion paper*. Sydney: Department of Environment and Conservation (NSW).
- Byrne, D. & Nugent, M. (2004). *Mapping attachment. A spatial approach to Aboriginal post-contact heritage*. Sydney: Department of Environment and Conservation (NSW).
- Clarke, A. & Patterson, A. (Eds.) (2003). Case studies in the archaeology of cross-cultural interaction. Special issue, *Archaeology in Oceania*, 38(2).
- Clarkson, C. & Lamb, L. (Eds.) (2005). *Lithics Down Under: Australian Perspectives in Lithic Reduction, Use and Classification*. Oxford: British Archaeological Reports.
- Clegg, J. (1979). Science, theory and Australian prehistoric art. *Mankind* 12, 42–50.
- Cole, N. (2000). The 'direct dating' of rock-pictures at Laura. In G.K. Ward and C. Tuniz (Eds.), *Advances in dating Australian rock-markings: Papers from the first Australian rock-picture dating workshop* (pp. 76–79). Occasional AURA Publication 10. Melbourne: Australian Rock Art Research Association.
- David, B. & Wilson, M. (2002). *Inscribed landscapes. Marking and making place*. Honolulu: University of Hawai'i Press.
- David, B., McNiven, I., & Barker, B. (Eds.) (2006). *The social archaeology of Australian Indigenous societies*. Canberra: Aboriginal Studies Press.
- Fforde, C. & Ormond Parker, L. (2004). Repatriation developments in the UK. *Indigenous Law Bulletin*, 5(6), 9–13. www.eniar.org/info/ilb.html.
- Flinders University (2002). *Student related policies and procedures manual: Research policy*. Adelaide: the Publications Unit, Public Affairs Office, Flinders University.
- Flood, J. (1983). *Archaeology of the dreamtime*. Sydney: Collins.
- Franklin, N. (1986). Stochastic vs emblematic: An archaeologically useful method for the analysis of style in Australian rock art. *Rock Art Research*, 3, 121–40.
- Giddens, A. (1979). *Central problems in social theory*. London: Macmillan.
- Graham, E. (1998). Mission archaeology. *Annual Review of Anthropology*, 27, 25–62.
- Harrison, R. (2004). *Shared landscapes. Archaeologies of attachment and the pastoral industry in New South Wales*. Sydney: University of New South Wales Press.
- Harrison, R. & Williamson, C. (Eds.) (2004). *After Captain Cook: The archaeology of the recent Indigenous past in Australia*. California: AltaMira Press.
- Hiscock, P. (1994). Technological responses to risk in Holocene Australia. *Journal of World Prehistory*, 8(3), 267–292.
- Hiscock, P. (1989). Artefact recording in the field. In J. Flood, I., Johnson, & S. Sullivan (Eds.), *Sites and bytes. Recording Aboriginal places in Australia* (pp. 20–38). Canberra: Australian Heritage Commission Special Australian Heritage Publication Series Number 8. Australian Government Publishing Service.

- Holdaway, S. & Stern, N. (2004). *A record in stone: The study of Australia's flaked stone artifacts*. Canberra: Aboriginal Studies Press.
- Layton, R. (1992). *Australian rock art: A new synthesis*. Cambridge: Cambridge University Press.
- Lightfoot, K. (1995). Culture contact studies: Redefining the relationship between prehistoric and historical archaeology. *American Antiquity*, 60(2), 199–217.
- Long, A. (2003). *Scarred trees. An identification and recording manual*. Melbourne: Aboriginal Affairs Victoria. Available on-line at: <http://www1.dvc.vic.gov.au/aav/heritage/forms>.
- MacIntosh, N.G.W. (1977). Beswick Creek Cave two decades later: A reappraisal. In P.J. Ucko (Ed.), *Form in indigenous art. Schematisation in the art of Aboriginal Australia and prehistoric Europe* (pp. 191–197). Canberra: Australian Institute of Aboriginal Studies.
- McBryde, I. (1974). *Aboriginal prehistory in New England: An archaeological survey of northwestern New South Wales*. Sydney: Sydney University Press.
- McDonald, J. (1992). The Great Mackerel Rockshelter Excavation: Women in the archaeological record. *Australian Archaeology*, 35, 32–50.
- May, S., Gumurdul, D., Manakgu, J., Maralngurra, G., & Nawirridjm, W. (2005). 'You write it down and bring it back . . . that's what we want'—revisiting the 1948 removal of human remains from Kunbarlanja (Oenpelli) Australia. In C. Smith & H.M. Wobst (Eds.), *Indigenous archaeologies: Decolonizing theory and practice* (pp. 110–130). London: Routledge.
- Maynard, L. (1997). Classification and terminology in Australian rock art. In P.J. Ucko (Ed.) *Form in Indigenous art. Schematisation in the art of Aboriginal Australia and prehistoric Europe* (pp. 387–402). Canberra: Australian Institute of Aboriginal Studies.
- Morphy, H. (1998). *Aboriginal art*. London: Phaidon Press.
- Morwood, M. (2002). *Visions of the past: The archaeology of Australian Aboriginal rock art*. Sydney: Allen and Unwin.
- Morwood, M. & Smith, C. (1994). Rock art research in Australia 1974–94. *Australian Archaeology*, 39, 19–38.
- Mulvaney, D.J. & Kamminga, J. (1999). *Prehistory of Australia*. Sydney: Allen and Unwin.
- Murray, T. (1996). Contact archaeology: Shared histories? Shared identities? In S. Hunt & J. Lydon (Eds.), *SITES. Nailing the debate: Interpretation in museums* (pp. 199–213). Sydney: Historic Houses Trust of New South Wales.
- Murray, T. (Ed.) (2004). *The archaeology of contact in settler societies*. Cambridge: Cambridge University Press.
- National Health and Medical Research Council (2003). *Values and ethics: Guidelines for ethical conduct in Aboriginal and Torres Strait Islander health research*. Canberra: Commonwealth of Australia.
- Paterson, A. (2003). The texture of agency: An example of culture-contact in central Australia. *Archaeology in Oceania*, 38(2), 52–65.
- Rigney, D. & Worby, G. (2005). Towards an Indigenous research charter. In C. Smith & H.M. Wobst (Eds.), *Indigenous archaeologies: Decolonizing theory and practice* (pp. 369–391). London: Routledge.
- Riley-Mundine, L. (1988). An Aboriginal perspective to Australian archaeology. Unpublished paper presented to the Department of Archaeology, University of New England.
- Rosenfeld, A. & Smith, C. (1997). Recent developments in radiocarbon and stylistic methods of dating rock-art. *Antiquity*, 71(272), 405–411.
- Rubertone, P. (2000). The historical archaeology of Native Americans. *Annual Review of Anthropology*, 29, 425–446.

- Silliman, S.W. (2005). Culture contact or colonialism? Challenges in the archaeology of native North America. *American Antiquity*, 70(1), 55–74.
- Smith, A. & Beck, W. (2003). The archaeology of no man's land: Indigenous camps at Corindi Beach, mid-north coast New South Wales. *Archaeology in Oceania*, 38(2), 66–77.
- Taylor, C. (1993). *Multiculturalism and the politics of recognition*. Princeton: Princeton University Press.
- Thorne, A. & Ross, A. (1986). *The skeleton manual*. Sydney: National Parks and Wildlife Service NSW, and the NSW Police Aborigine Liaison Unit.
- Torrence, R. & Clarke, A. (2000). Negotiating difference: Practise makes theory for contemporary archaeology in Oceania. In R. Torrence & A. Clarke (Eds.), *The archaeology of difference: Negotiating cross cultural engagements in Oceania* (pp. 1–31). London: Routledge.

Key Guides and Resources

- The Archaeologist's Field Handbook* (Burke and Smith, 2004) and accompanying website (www.allenandunwin.com/arch_handbook/resources.asp) contains several on-line resources for conducting archaeological fieldwork in Australia, including a range of site recording forms.
- <http://arts.anu.edu.au/arcworld/resources/stonegloss/gloss.htm>, is a glossary of terms used in Australian lithic analysis prepared by Dr Peter Hiscock of the Australian National University.
- <http://unicorn.aiatsis.gov.au/> hosts MURA, the online library catalogue of the Australian Institute of Aboriginal and Torres Strait Islander Studies. MURA makes it easy to search AIATSIS' extensive library of Indigenous Australian material (including both published and unpublished matter).

7

Doing Historical Archaeology in Australia

Historical archaeology studies the colonial past of Australia—the places and artifacts that have been left behind by over two hundred years of non-Indigenous activity. Britain officially colonized Australia in 1788, when the First Fleet landed in Sydney Cove carrying 717 convicts, 191 marines and 19 officers. There had been contact between Indigenous people and Europeans long before this date along both the northern and western coasts of Australia (see Chapter 2), but 1788 heralded the first influx of foreign people desiring permanently to colonize the Australian continent. An enormous range and variety of people from many different countries have since settled either temporarily or permanently in Australia, so much so that until 1880 the majority of white Australians were immigrants, rather than native born (Camm & McQuilton, 1988:142). Throughout the nineteenth century these immigrants were drawn from places as diverse as the UK, Japan, Russia, Poland, Italy, Greece, Germany, China, Pakistan, India, Turkey and the Pacific Islands. As a result, historical archaeology deals with the varieties of material evidence that have resulted from more than two centuries of this colonial occupation and is much more than just the archaeology of British colonization.

The present day system of states and territories in Australia was established in the twentieth century, after Federation in 1901 created a Commonwealth government to take control of affairs that affected the entire nation, including defence, postal and customs matters. Prior to that date all settlements were known as colonies and each had their own systems of law and government (Figure 7.1). New South Wales was the original colony, although its borders have changed several times over the past 220 years. The Swan River Colony in Western Australia became the second settled area of Australia when it was proclaimed in 1829. By contrast all of the other colonies were originally part of New South Wales. South Australia became a colony when it was established in 1836 by the South Australian Company. Its current western boundary was fixed in 1861. Victoria was part of NSW until 1851, and Queensland was established as a separate colony in 1859. Its current boundaries were fixed in 1862. The Northern Territory was annexed to South Australia between 1863 and 1911, after which it was declared a Commonwealth territory. The Australian Capital Territory was created in 1911 as the location of the national capital, Canberra. If you are working on a site from

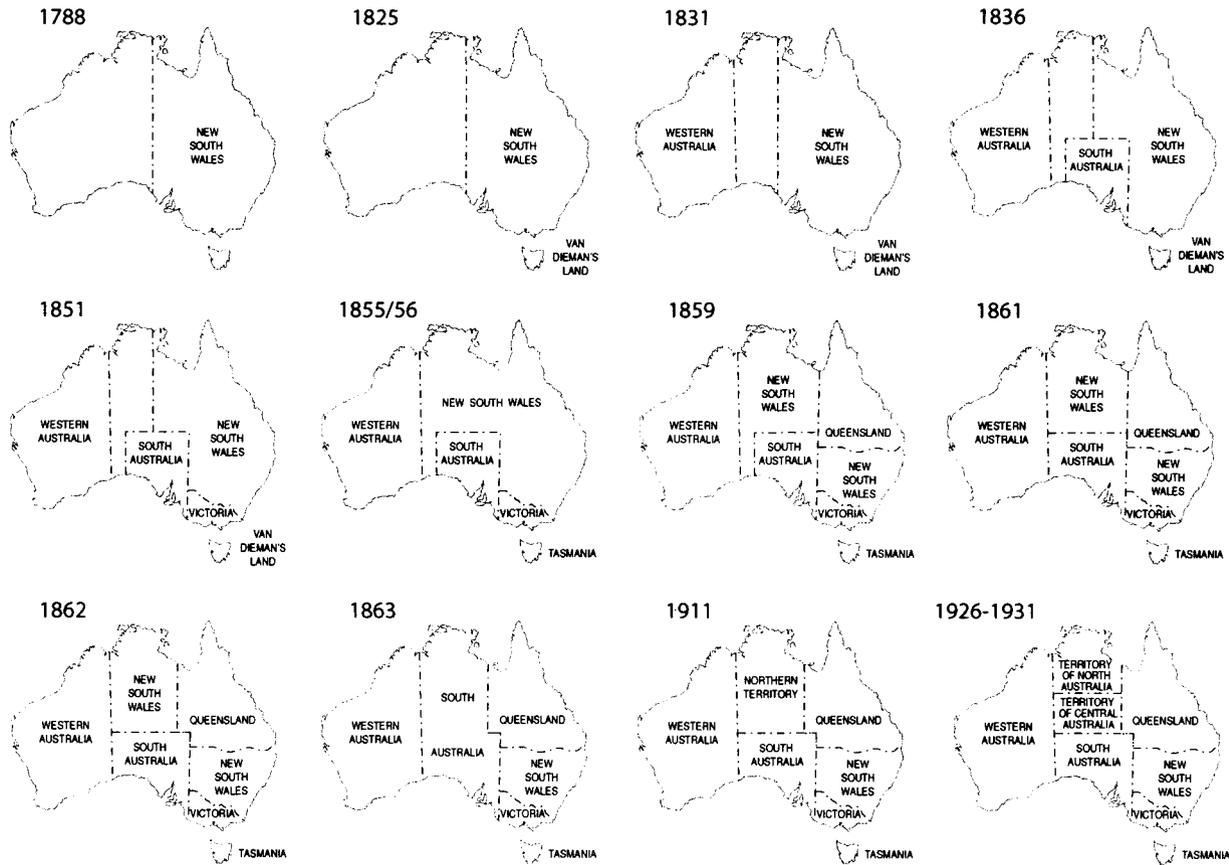


FIGURE 7.1. Historical development of Australian colony, state and territory boundaries.

the pre-1901 period, you should be aware of these changing boundaries, as this may affect the location of primary documentary sources. For example, documents relating to the Northern Territory before 1911 are likely to be located in Adelaide, the capital of South Australia, rather than in Darwin, the capital of the Northern Territory, and records relating to Queensland prior to 1859 are likely to be located in Sydney, New South Wales.

7.1. Types of Sites

In Australia, historical archaeological sites represent a great diversity of activities, all part of the many ways in which settler groups have attempted to explore and exploit the Australian continent. Unlike Indigenous sites which can be separated into relatively discrete site types, the main categories of historical site often reflect the different kinds of industries which have been established over the last two centuries, such as mining, pastoralism, agriculture, commerce, whaling, or timber-getting. These kinds of explicitly work-related categories, however, tend to exclude the historical contributions of those other than adult males and ignore common site types such as houses, schools, hospitals and cemeteries. In reality there are as many different types of historical sites as there are different types of human behavior in the past, and there is little point in trying to separate them according to function.

As a rule, because it is all from a relatively narrow time period (200 + years) and because there is an enormous variety of different site types, historical archaeology in Australia tends not to be separated into discrete specializations. Industrial archaeology, for example, is not treated as a distinct and separable facet of historical archaeology in this country as it is in the UK. The exceptions to this are maritime archaeology (the archaeology of shipping, maritime industry and related support industries) and contact archaeology (places where Indigenous and non-Indigenous activities overlap), which are often treated as discrete sub-entities, although both still have considerable overlap with general historical archaeology.

7.2. Locating Primary Documentary Information

As with historical archaeology in any part of the world, there are multiple types of evidence that can be drawn upon in Australia. Most historical archaeological research relates to the documentary record of sites and artifacts and the behaviors that created them. In Australia the best collections of primary documents are held in the various public repositories around the country, particularly the government archive and library systems. The National Archives of Australia* host an on-line guide to the many archival collections available called Archives of Australia (<http://www.archivenet.gov.au/archives.html>).

The reproduction of any document or picture from an archival or library collection usually will require both copyright permission (to copy, photograph or scan the item) and permission to publish or publicly reproduce it. All institutions have their own forms for this, and it is a standard process for the further distribution or publication of materials beyond personal use or private research. If, for example, you want to show an image in public (i.e. through a public lecture, or as part of interpretative materials such as a sign or a pamphlet), or use it for profit (i.e. in a publication, including interpretive materials), you will need to obtain both sets of permission. Using an image in an unpublished report, such as a consultancy report, does not usually require either copyright permission or permission to publish (for more information on publication issues, see Chapter 10).

7.3. Sources of Official (Government) Information

The main federal repository is the National Archives, which has branches and reading rooms in every capital city. The National Archives contains a range of nineteenth and twentieth century records created by agencies of the Commonwealth Government, although they also hold records generated by Commonwealth persons such as governors-general, ministers or senior public servants. The Australian War Memorial* is also a federal repository, but specializes in collections relating to all aspects of Australian involvement in military campaigns, organizations and works from the nineteenth and twentieth centuries, including numerous private records. The Australian Institute of Aboriginal and Torres Strait Islander Studies, as its name suggests, maintains an excellent collection of archival and library resources related to Indigenous people both pre- and post-contact (for more information see Chapter 6). The National Library in Canberra is also a federal repository, but has a much broader collection of non-Commonwealth records relating to national identities, events or issues, including extensive collections of Australiana, oral histories and photographs.

At the state level the main repositories for primary documentary materials are the various State archives in each capital city, which hold official correspondence and records relating to state government functions. These cover a range of useful information, from maps, plans, newspapers, and government gazettes, to official correspondence, reports and census information. Both National and State archives also hold collections of records relating to shipwrecks and Marine Courts of Inquiry. In addition, some state government departments maintain their own special archives, such as the Museum of Lands, Mapping and Surveying* attached to the Department of Natural Resources in Brisbane*, the Justice and Police Museum* in Sydney, or the DIGS archive system operated by the Department of Primary Industries* in NSW.

At a local level, city or shire councils sometimes keep collections of municipal information, such as rate books and correspondence between landowners and councils. Some larger city councils may support formal archival services, such

as the Adelaide Archives*, maintained by the Adelaide City Council that contains material relating to the municipal growth of the city. It is well worth enquiring at the nearest council whether they hold any such historical information, or whether they have passed this information along to the relevant state archive. There are also a number of smaller archives in existence, often maintained by individual companies or universities, that may hold special collections of information relating to their own development and history, or materials collected by their members.

All the larger archival collections maintain up-to-date catalogs of their precise contents with search engines available on-line. Some state archives allow you to order material over the internet 24 hours in advance, while the National Archives allows you to request scanning for some documents which they will then make freely available over the internet through their catalog system. This will cost you nothing, other than the waiting period for the scanning to be completed.

An earlier source for some kinds of official information are the Parliamentary Papers for each colony, which often included explorers' reports, the results of official inquiries and reports from parliamentary-funded activities. Before the New South Wales and Victorian Mines Departments were created in 1874 and 1875, for example, the Parliamentary Papers for those colonies contained inquiries on mining matters and other early mining records. Copies of Parliamentary Papers can be found in State Libraries and in some university libraries.

Wayne Johnson's Guide to Urban Archaeology in Sydney

Archaeological investigations involving the post-1788 settlement of New South Wales is regulated through the *NSW Heritage Act* which was passed by State Parliament in 1977. Two years later the *Environmental Protection and Assessment Act* incorporated archaeology and heritage matters into the State's planning system. This meant that archaeological sites could be identified along with buildings in schedules of heritage sites, and appropriate actions taken when redevelopment for these sites is proposed.

In the immediate years following the introduction of this legislation archaeological sites such as First Government House (1788–1847), the site of Sydney's first jail (1797–1833) and Hyde Park Barracks (1819) were the subject of archaeological investigations. Initially urban archaeology was the subject of "the first settlement", surrounded by the mystique of colonial convictism, and concentrating on preconceptions and stereotypes of bedraggled convicts and institutionalized labor.

By the late 1980s attention was focussed on large urban sites in Sydney and the site of the 1789–1790 settlement at Parramatta. "Lilyvale" in Sydney's Rocks district was perhaps a watershed in archaeology of the colonial period as its rich archaeological record of the remains of some dozen or so dwellings was read in conjunction with the historical development of this, one of the earliest settled

parts of Sydney. The archaeological record indicated that the inhabitants of the site in its earliest days ate well, exercised wide consumer choice in material possessions and generally had a standard of living that challenged the traditional view of the convict "class" that inhabited the area.

Archaeology demonstrated that here was a society that ate lamb (not mutton), oysters, duck and bottled condiments from Spode and Wedgwood china, and drank their alcohol from clear glass-stemmed glasses after it had been poured from decanters. This view, in itself a generalization, certainly set minds thinking about the standard of living of the convict inhabitants of Sydney. It presented a confronting view that fired the research questions aimed at subsequent urban sites. The material remains themselves tell a story of the imposition of a European concept of settlement upon a landscape that had previously not known its like. Not only is there evidence of the individuals' arrangement of their own domestic spaces, but also of the attempts to "tame" the landscape through cutting and filling; quarrying for stone, building retaining walls and also the initial failed attempts to apply deep-furrowing agriculture to thin soils.

It was not only the preconceptions of convict society that were challenged by the examination of the archaeological record. By the mid-19th century, Sydney, along with other urban and rural centers of Australia, was experiencing an influx of migrants. Settling in the older established urban centers they brought their own traditions and concepts which melded with those already established to form what was to become modern Australia. Smoking pipes with slogans such as "Erin go Bragh" and "Reform" demonstrate nationalistic, social and political beliefs. Pipes with a stockman seated beneath a tree, along with a sheep, and marked "Squatter" reflect a growing awareness of an Australian identity. Established urban areas became identified as "slums" by the end of the 19th century. But what did the archaeological record reveal of life in these "slums"? Further research still needs to be undertaken to gain a fuller understanding of the material record left behind by these so-called "slum dwellers", but all indications are that, there was a certain degree of material comfort and perhaps a quest for gentility offered by a new start in a new land.

Throughout the 1990s and 2000s urban archaeology in NSW has continued to attract media attention, and scheduled open days attract visitors to sites. School groups often benefit from educational programs aimed at explaining the co-existence of historical and archaeological evidence when exploring the past.

In almost every case, urban archaeological investigations have come about as a result of the pressures of development on urban sites. Early identification of a site has led to test excavations being conducted on many sites and to the amendment of site plans to incorporate some archaeological features and allow for interpretation in the completed project. More and more developers have seized on the publicity the archaeological investigations attract to promote themselves as good corporate citizens.

In New South Wales post-1788 archaeology is administered by the NSW Heritage Office, based at Parramatta, and further information on archaeological excavations can be obtained from that source or by visiting their website.

Further Reading

Godden, Mackay, Logan Pty Ltd (1996). *The Cumberland/Gloucester Streets site, the Rocks: Archaeological investigations*. Sydney: Godden Mackay Logan Pty Ltd.

Karskens, G. (1999). *Inside the Rocks: The archaeology of a neighbourhood*. Sydney: Hale & Iremonger.

Kelly, M. (1997). *Anchored in a small cove: A history and archaeology of the Rocks, Sydney*. Sydney: Sydney Cove Authority/Sydney Harbour Foreshore Authority.

Mayne, A. & Murray, T. (2001). *The archaeology of urban landscapes: Explorations in slumland*. Cambridge: Cambridge University Press.

Murray, T. (Ed.) (2003). *Exploring the modern city: Recent approaches to urban history and archaeology*. Sydney: Historic Houses Trust of NSW.

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7.4. Sources of Private and Personal Information

The best sources for personal material are the various state and territory libraries located in each capital city. These hold invaluable state-wide collections of both primary and secondary material, including personal correspondence, manuscripts, diaries and extensive pictorial and photographic collections. Much of this material is held within specialist sub-libraries attached to each State Library*, such as the Mitchell Library in Sydney, the John Oxley Library in Brisbane, the Batty Library in Perth, the La Trobe Library in Melbourne and the Mortlock Library in Adelaide.

The Register of Australian Archives and Manuscripts (<http://www.nla.gov.au/raam>) is a guide to collections of personal papers and non-governmental organizational records held by all of the major Australian libraries and archives. This register includes collections of manuscript and archival materials held in Australia, whether of Australian origin or not, single unpublished primary sources, such as letters, deeds or diaries, photocopies or microfilms of Australian manuscript or archival materials, including non-government overseas material relating directly to Australia, and personal records held in government archives. A similar register, also hosted by the National Library, is the Australian Historic Records Register, which is a database for archival material held in private ownership in Australia (<http://www.nla.gov.au/ahrr>).

More eclectic collections of local information are often held by volunteer historical or genealogical societies, or local or regional libraries and heritage centers, although the quality of this may vary. These sorts of collections have the potential to contain a wealth of rare local information, although this is usually secondary source material. Many of these collections are often unregulated, however, and

their collection policies may not make all their information easily accessible. For any historical archaeological study you undertake in Australia it is well worth visiting the local historical society or library to evaluate their material just in case.

7.4.1. Pictures, Photographs and Illustrations

Pictorial sources can include paintings, drawings, prints and photographs and are often useful for historical archaeological purposes. When searching for photographs or historical illustrations, the most useful collections are those with on-line catalogs, such as those maintained by the National Library of Australia, the Australian War Memorial and the National Archives. The Australian War Memorial, for example, has over 200,000 on-line photographs available through their web site and the major state libraries also have searchable on-line databases of their collections. If you are unable to visit a collection, some repositories (such as the National Archives and the John Oxley Picture Library in Queensland) will conduct research for you for a fee, although the waiting period can be lengthy.

Much of this on-line pictorial material is drawn together through a single service hosted by the National Library called Picture Australia, which is an Internet-based service that allows you to search many significant online pictorial collections at the same time (<http://www.pictureaustralia.org>). Apart from the National Library and every State Library collection, Picture Australia also contains material from the collections of several participating agencies, such as the ACT Heritage Library, the Australian Heritage Photo Library, the City of Sydney Archives*, various university archives and the National Gallery of Australia, as well as Australian material held in overseas collections.

7.4.2. Newspapers and Periodicals

Contemporary newspaper reports are a good source of information about many things, such as shipwrecks, building construction, property sales and rentals, businesses and contemporary attitudes. It is often wise to check local newspapers, as well as the larger metropolitan periodicals, as these will always give more information about local events and people. It is also worth bearing in mind that competing newspapers published in the same time period would often report quite differently on the same events. The different views that they carry can often provide complementary information that is useful to the historical archaeologist. Some of the best, although largely metropolitan, sources to start with are:

General

- The Illustrated London News (1842–1890).
- The Australasian Sketcher (1873–1889).
- The Daily Commercial News (1895–1920).
- The Australasian Shipping News (1877–1900).
- The Australian Town and Country Journal (1870–1919).

All of these periodicals were designed to be of general interest and will therefore cover a range of issues that can provide information on regional as well as metropolitan sites and events.

Queensland

The Queenslander (1866–1939).
The Courier Mail (1864–present).

New South Wales

The Sydney Morning Herald (1833–present).
The Illustrated Sydney News (1853–1894).
The Sydney Gazette (1803–1842).
The Sydney Monitor (1826–1841).
The Sydney Mail (1860–1902).

Victoria

The Argus (1848–1957).
The Age (1854–present).
The Herald (1855–1990).

Tasmania

Hobart Town Gazette (1820–1927).
Hobart Guardian (?–1854), incorporated by the Hobart Mercury (1854–1858), later the Hobart Town Daily Mercury (1858–1860), later The Mercury (1860–present).

South Australia

The Advertiser (1889–present).
Southern Australian (1838–1844).
South Australian (1844–1851).

Western Australia

West Australian (1833–present).
The Inquirer (1855–1901), later incorporated into the Daily News (1882–1990).
The Western Mail (1885–1955).

Northern Territory

Northern Territory Times and Government Gazette (1873–1932).
The Northern Standard (1932–1942; 1946–1954).
Northern Territory News (1952–present).

As well as general news, some of these periodicals will contain sections dedicated to various industries or developments and microfilms will be held in all state libraries and in many University libraries. They may also be held in major regional public libraries. There are also hundreds of regional and local Australian newspapers published throughout the nineteenth and twentieth centuries that are too numerous to list here. They will be invaluable sources of local information that is unlikely to be found in the larger, major periodicals, so don't restrict your search.

A useful web source to access this kind of information is the Australian Periodical Publications 1840–1845 project, maintained by the National Library of Australia (<http://www.nla.gov.au/ferg>). This project aims to create a digital library of selected, short-lived Australian journals and newspapers that began publication between 1840 and 1845. At present more than 25 titles are available via the web. The ultimate goal of the project is to provide digital access to up to 74 titles.

7.5. Censuses and Other Statistical Returns

All nineteenth century colonies conducted regular censuses of their population, although not all have survived until the present day. In South Australia, for example, the 1841 census is the only one for which any detailed records survive. New South Wales, by contrast, has records of its annual musters from 1788 until 1837, and its annual census from 1828 onwards. Some of the nineteenth century records contain very detailed information, but because it is Australian federal government policy to destroy all name-identified census returns for privacy reasons, all returns after 1901 have been destroyed and only the summary data is now publicly available. Details of nineteenth century Australian census information are located at: <http://www.jaunay.com/auscensus.html>.

One of the most useful compilations of nineteenth century statistical material is the “Blue Books”: sets of statistical returns submitted annually to the Colonial Office by the governor of each colony. They are a great source of very detailed information on a range of things, including descriptions, quantities and the value of all goods imported from and exported to Great Britain, British colonies and foreign states. Among other things, this kind of material can provide an indication of when certain commodities became available in each colony, information that may be relevant when trying to date the introduction of certain materials to a site or region. Copies of Blue Books can be found in State Archives and State Library collections.

7.6. Oral Histories

All of the state and territory libraries and some of the State archives will hold collections of oral history materials. The most comprehensive collection is held by the National Library of Australia, which curates over 58,000 oral history and

folk recordings as part of its national collections policy. The National Library also maintains "Australia's Oral History Collections: A National Directory": a searchable on-line database of oral history collections held in various repositories across Australia. The database allows you to search within tens of thousands of hours of oral history recordings and is hosted at <http://www.nla.gov.au/apps/ohdir>. You cannot directly access any of the recordings through this service, but you can identify potential sources of information from any state or territory. The Directory lists over 460 collections in major state libraries and archives, public libraries, local history societies and universities, as well as smaller collections held by schools, religious bodies, government departments and private bodies.

7.7. Maps and Other Cartographic Information

Collections of historic maps and plans are usually held within each major State Library, and in State archival collections. Aerial photographs are also a valuable tool, and for some areas air photos exist taken as early as the 1930s and 1940s. The National Library of Australia in Canberra, and the State Libraries and/or Lands Departments hold full runs of air photo series.

Some individual government departments maintain, or are creating, collections of on-line historical and geographical data that can be useful to historical archaeological research. The Parish Map Preservation Project maintained by the NSW Department of Lands, for example, is a cooperative effort by the Department of Lands, the Department of Land and Water Conservation and the State Records (archives) Authority. It aims eventually to digitize all of the state's historical and current Parish, Town, County and Municipal maps and to make them available on-line. This collection will also contain such resources as Pastoral Maps, showing Pastoral Runs dating from the mid 1800s. Maps digitized to date by this project can be accessed via the Department's web site at <http://www.lpi.nsw.gov.au/maps/pmap>.

Tips for Researching the History of a Building

The key to successfully researching a building is to make sure you go armed with as much information about its location as possible. If possible make sure you know its street address, the location of any neighboring buildings and landmarks (such as churches, or police stations), and cross streets. Even better, find out the allotment and section number for the block on which the building sits.

The three best sources for information about buildings are:

- Post Office Directories and Almanacs.
- Rate Books.
- Titles Office records.

Directories can be found in state library and state archive collections. When working through directories, make sure that you stay on the track of the right

building. The numbering system changed often throughout the 19th century, as did the names of streets and houses (not to mention the creation of new streets following subdivisions). The best way to combat this is to continually note down the names of landholders on either side of your building and to keep matching the pattern of occupiers to be sure you are documenting the right property.

Rate Books are also found in state archive and state library collections and sometimes also in local or municipal council collections. Coverage for Queensland is very sparse, however, and in Tasmania they are termed assessment or valuation rolls. Rate books will often describe a property, as well as give you information on who was occupying it and how much the place was worth to the council in rates. Look for changes in the description of a building or set of buildings, the name of the owner or occupier and any changes in the value of the property. In archaeological terms, marked changes in the value of a property can indicate that a building has been constructed or enlarged, or that some other improvements have been carried out.

Titles Office records are held in specific government repositories in each state. Titles will give you a sequence of ownership for the land and sometimes information on the purchase price, any subdivision of the land and mortgages taken out by the owner. To search for these records you will need the Crown allotment number for the property, as well as the section number and the name of the Parish and County. One thing you should be aware of is that the title system changed in the nineteenth century, from the Old System which operated until 1863, to the present Torrens System. Torrens titles came into effect in 1858 in South Australia, 1862 in Victoria and 1863 in New South Wales. Under the Old System, title documents are called Deeds; under the Torrens system they are called Certificates of Title. Before conversion to Torrens title, the Old System recorded all successive transactions for an allotment, from the name and date of the first purchaser. Often, the record of a mortgage having been taken out on a particular piece of land will indicate the construction of a building on that site and the size of the mortgage will provide a fairly reliable guide to the size and construction material of the building. Note that in South Australia, you will need written permission from the owner of private property to access title records relating to their property.

More detailed information on using maps to research buildings can be found in Scurfield (2004).

From: Kellaway, 1991; Sagazio, Kellaway, & McWilliam, 2004.

7.8. Industrial and Technical Resources

If you are working on historical archaeological sites relating to specific industries (e.g. mine sites), all of the state libraries hold collections of nineteenth and early twentieth century technical manuals or engineering works. Written for various

industries, these are an invaluable source of information about particular sites and details of equipment and processes.

In addition, specialist journals were published for almost every major profession and trade throughout the nineteenth and twentieth centuries. The range and type of specialist information you can extract from these is unparalleled, as even the advertisements will contain pertinent information. For the mining industry, for example, the *Australian Mining Standard* (1888–), the *Australian Mining and Engineering Review* ([1908–1917] afterwards known as the *Chemical Engineering and Mining Review* [1918–1960]), and the *Engineering and Mining Journal* (1869–), all provide first hand descriptive and technical information about many aspects of the general industry, as well as describing specific sites. Examples for other industries include the *Australian Storekeepers' and Traders' Journal* (1895–1936), the *Australian Brewers' Journal* (1882–1921), the *Australasian Coachbuilder and Saddler and Liveryman's Journal* (1892–1901), or the *Australasian Ironmonger, Builder, Engineer and Metal Worker* (1886–1890). It is well worthwhile investigating what collections are available in the nearest major library. In many cases older files, especially if they were overseen by a government department such as the Department of Mines, may have been transferred to the relevant State archive for permanent care, so you should check all major government repositories as well.

7.9. Ethical Issues in Historical Archaeology

Just as with any archaeological project, there are a variety of ethical concerns when working as an historical archaeologist in Australia. Chiefly, these are to do with proper consultation with stakeholders before, during and after work at a site, and adequate distribution of the results of work once it is completed. Historical archaeology is in large part quite literally the heritage of contemporary communities. There is often intense interest in historical archaeological work from members of the wider public, particularly in urban historical archaeological projects, which are highly visible and widely accessible. In addition, given the number of different immigrant groups to settle in Australia over the past 200+ years, there are many different stakeholder groups who value historical archaeological work and who have an interest in the process and its results. Dealing with descendant non-Indigenous communities and the consequent aspects of a living heritage that this conveys, as well as the complications of competing claims on heritage and/or conflicting versions of the recent post-contact past, are all serious ethical issues that may confront the historical archaeologist.

7.9.1. *Historical Archaeology and Consultation*

One thing to be aware of is that just because a site is historical, this doesn't mean it is exempt from Indigenous ethics considerations (see Chapter 6). All of Australia is Indigenous land, and in some states (such as Queensland, for instance)

this is codified into requiring consultation with, and permission from, Aboriginal groups as part of the permitting process to conduct historical archaeological surveys or excavations (for more details on who requires this, see Table 5.2). The other instance when you may have to consult with Indigenous people as part of an historical archaeological project is if Native Title is at issue. In this case, then any activity that may disturb Indigenous materials will have to be negotiated with the Native Title claimants, even if it is for an historical archaeological excavation.

The simple rule of thumb in Australia is, “If in doubt, consult”—certainly the more consultation you undertake, the less likely you are to alienate anyone, and the fewer problems you should encounter in the course of your project. Wider consultation will also enhance your ability to return your results to the community in ways that are useful for them, whether this be through public excavations and site tours, school talks, public lectures, project web sites and popular publications, guidebooks or interpretive materials.

7.9.2. Working with Community Groups

Consultation is not solely limited to Indigenous groups. Particularly if you are conducting historical archaeological fieldwork, you may need to consult with local community groups, such as the local branch of the National Trust, or members of the local historical society. While it is not usually considered mandatory to consult with local communities in the same way as it is for Indigenous groups, such consultation can have many benefits. It can help facilitate access to sites or personal collections of information and may suggest fruitful directions for your research. “Community” includes all the people who live in the area where an archaeological project is being undertaken, including all descendant communities and others with an interest in heritage, and will include a range of stakeholder groups, each of which might bring particular desires or skills to a project.

Approaching landowners or tenants for permission to access their land *is* a mandatory aspect of consultation, however, both as a matter of politeness and privacy, as well as good ethical practice. In some states obtaining this permission is an essential prerequisite to undertaking fieldwork—in Queensland, for example, you will need written permission to prove you may enter land before you can obtain a permit to survey. In a more general fashion, “public archaeology”, or inviting members of the general public to visit a site and learn from the archaeological work being conducted there, has become an important facet of much historical archaeological work in Australia. This is most noticeable on the large urban sites where the visibility of archaeological work is high. Public archaeology is one way to involve stakeholders in the actual business of archaeology, through encouraging volunteer assistance, educational programs or open days. If you are visiting Australia and want to get a feel for historical archaeology as it is practised in urban settings, the NSW Heritage office maintains a list of historical archaeological sites open with interpretation to the public at http://www.heritage.nsw.gov.au/06_subnav_02_1.htm#major.

On the same site you will also find a listing of volunteer opportunities for working on real archaeological sites.

7.9.3. *A Colonial Past for a Multicultural Australia*

It is important to recognize that Australian historical archaeology is not just the archaeology of British colonization. Many smaller cultural minorities made Australia their home, and may therefore have a stake in cultural heritage issues. These groups are often overlooked in public histories and documentary records, and archaeology might be one of the few ways in which their contribution to Australian society can be recognized. The Burra Charter is very explicit about dealing with the co-existence of cultural values. Places with shared heritage values (i.e. places that are valued by more than one community, possibly for very different, or even conflicting, reasons) should be managed to conserve all values and to involve all associated communities (Marquis-Kyle & Walker, 2004:50). This is, of course, not always easy, but it is important to acknowledge this potential, rather than overlooking one group and their values in favor of another.

The previous incarnation of the Australian Heritage Council, the Australian Heritage Commission (<http://www.ahc.gov.au/publications/index.html>), has published some guidelines for researching immigrant sites. *Migrant Heritage Places in Australia* (Australian Heritage Commission, 2001) deals with the general process of locating and assessing places associated with immigrant groups, while *Tracking the Dragon* (Australian Heritage Commission, 2002), covers the identification and assessment of Chinese heritage sites. The NSW Heritage Council (http://www.heritage.nsw.gov.au/03_index.htm) is also a good resource for publications in this vein, although they are targeted specifically to New South Wales sites and issues. *Beyond the Rolling Wave: A thematic history of Greek settlement in NSW* (Turnbull and Valiotis, 2001), *Chinese Settlement in NSW: A thematic history* (Williams, 1999), *The Dutch in NSW: A thematic history* (Velthuis, 2005) and *A History of Italian Settlement in NSW* (Kevin & Pesman, 2001) are all excellent starting places to begin investigations of immigrant heritage.

In recognizing the existence of many different stakeholder groups, Australia ICOMOS has drafted a *Code on the Ethics of Co-existence in Conserving Significant Places*, which they have appended to the Burra Charter. Informally known as the cultural diversity code, this assumes that the healthy management of cultural difference is the responsibility of society as a whole and that in a pluralist society, such as modern-day Australia, differences in value exist and contain the potential for conflict. Ethical practice is therefore necessary for the just and effective management of places of diverse cultural significance.

7.9.4. *Obtaining an Excavation Permit*

There are clear ethical obligations surrounding who can practise as an historical archaeologist in Australia, although this is more strictly tied to the qualifications necessary to obtain an excavation permit in most states and territories. You cannot

conduct any intrusive archaeological work (including auguring, test pitting, metal detecting or surface clearance) at a site anywhere in Australia without an excavation permit. Auguring is generally considered unacceptable at any archaeological site. Just as legislation regulates work at archaeological sites, so, too, does it regulate who is considered properly qualified to conduct such work. There is a general ethical agreement amongst Australian archaeologists that an Honours degree or post-graduate equivalent is the minimum standard required to practise as a professional archaeologist in Australia (see Chapter 1). Some experience beyond the minimum three years required of an undergraduate degree in Australia is considered necessary in order to be able to apply legislation, understand the processes of archaeological heritage management, be able to make independent decisions, and supervise others, such as students or volunteers from the general public. While minimum qualifications are not monitored professionally through a formal accreditation process, as in other disciplines such as law or medicine, it is standard ethical practice, and will be directly relevant when applying for excavation or research permits.

Criteria for Qualifying as an Historical Archaeological Excavation Director in NSW

Basic Qualifications/Experience

Excavation Directors must be able to meet *all* the following requirements.

1. A tertiary honours (or Masters/PhD) degree or graduate diploma in archaeology or a related discipline *and* three years professional experience* in historical archaeology or a related archaeological field.
Or
A tertiary pass degree with subjects in archaeology or a related discipline *and* four years professional experience in historical archaeology or a related archaeological field.
Or
Professional accreditation by the Australian Association of Consulting Archaeologists or the Australian Institute of Professional Archaeologists.
2. A demonstrated understanding of NSW heritage legislation, assessment criteria and relevant archaeological guidelines/best practice methods and standards.
3. Demonstrated experience in the investigation of historical archaeological sites, project management and preparing written archaeological assessments/site management recommendations.
4. Ability to demonstrate that work under any approvals previously granted by the Heritage Council has been completed in accordance with the conditions of that approval and the final report has been submitted to the Heritage Office.

**Professional experience is considered to be work as a sub-consultant or consultant, including private consultancy and/or permanent or temporary government employment and/or research-based experience.*

All professionals/practitioners wishing to act as an Excavation Director must submit a written statement to the NSW Heritage Office addressing their ability to meet the basic criteria above. Each application will then be addressed on a case-by-case basis according to a criteria matrix for historical archaeological fieldwork experience (please contact the NSW Heritage Office for more information).

7.9.5. Other Ethical Obligations

Occupational health and safety is a relevant concern in any archaeological project. How deep an excavation can be, what safety mechanisms need to be put into place to make the excavation safe for workers, or how closely you can place a trench to an existing building, for example, are all concerns that may impact upon the conduct of historical archaeological fieldwork. It is mostly excavation work that will require detailed consideration of these issues, so you should make an effort to find out about the relevant occupational health and safety regulations before you begin work. Local councils should be able to advise you of any issues surrounding excavation near existing structures (there is likely to be a minimum distance) or in terms of how deeply you can excavate before a trench requires shoring or other safety measures.

Health and Safety Obligations Towards Volunteers

In recent years the use of volunteer labor has become quite routine on many historical archaeological projects, although it tends to be less common in Indigenous archaeology. On all projects with volunteer labor there are certain health and safety obligations, as well as other ethical concerns, that need to be taken seriously. Whether you are working as a volunteer—and therefore need to be aware of what you can reasonably expect—or whether you are employing volunteer labor on your own project, you need to be aware of what are considered to be acceptable working conditions. Firstly, it is the responsibility of the consultant to provide a safe working environment for volunteers and all other staff. Since the volunteer is not covered by workers' compensation insurance, as a consultant it will be your obligation to provide public liability insurance. Secondly, volunteers, because they are not paid wages, can expect to be reimbursed for any agreed expenses, such as travel to and from the site, or consumables. This may take the form of an allowance per day, or reimbursement for costs incurred.

In some states a formal induction program is necessary before you will be allowed access to a building site (many historical archaeological consultancies are

conducted in conjunction with development and so will be on active construction projects), such as the requirement for a “green card”, the informal name for a NSW WorkCover Construction Induction Certificate, before you can work on any NSW building site. Mine sites also usually have Occupational Health and Safety inductions to ensure that you are aware of your responsibilities when on site and behave appropriately with minimum risk to yourself and your co-workers. Appropriate insurance coverage may be required before you can work as a private contractor and in some states (such as NSW) you won’t be hired without it. The easiest way to find out about the additional levels of responsibility that may be placed on an archaeological project is to contact the local branch of the Australian Association of Consulting Archaeologists (AACAI), who should be well aware of the local conditions of practice.

Natalie Vinton’s Tips for Making the Most of Exciting Historical Archaeology Opportunities in New South Wales

Undertaking historical archaeological fieldwork and research in New South Wales requires plenty of enthusiasm, patience and a clear understanding of how historical archaeological resources are managed under the *Heritage Act 1977* (NSW). One of the most useful things to do before embarking on historical archaeological excavations in New South Wales is to check the NSW Heritage Office website for information relating to historical archaeology standards, practices and statutory requirements (www.heritage.nsw.gov.au). The website contains regularly updated information about legislative changes to the *Heritage Act* and how they will impact on excavation permit applications. It also contains excavation permit application forms, explanatory notes for archaeological applications, publications information and criteria for archaeologists wanting to direct historical excavations in New South Wales.

Many historical archaeologists, especially those who are recent graduates or new to the profession from international practice, do not realize how important it is to gain a sound understanding of the context in which historical archaeology is practiced in New South Wales. In particular, historical archaeologists who use the key conservation management documents in their work gain an advantage over counterparts who only develop knowledge of, and experience in, archaeological fieldwork. Key resources include the:

- *ICOMOS Burra Charter* (1999).
- *NSW Heritage Manual* (NSW Heritage Office and Department of Urban Affairs and Planning, 1996a).
- *Archaeological Assessment Guidelines* (NSW Heritage Office and Department of Urban Affairs and Planning, 1996b), and
- *Assessing Heritage Significance* (NSW Heritage Office, 2001).

Whilst extensive fieldwork experience (including voluntary and international fieldwork experience) provides an excellent basis for commencing a career in historical archaeology in New South Wales, long-term employment in historical

archaeology is more readily available to archaeologists who can demonstrate versatility in their skills. This includes sound field experience, a good understanding of the “relics” provisions of the *Heritage Act* and the ability to prepare a competent archaeological assessment in accordance with the NSW Heritage Office requirements.

For international and Australian archaeologists looking to undertake short-term seasonal fieldwork in New South Wales, the opportunities vary depending on the current developments occurring around the State. The majority of large-scale excavations—where teams of 10–20 archaeologists are employed to undertake fieldwork—tend to occur in the larger city centres such as Sydney and Parramatta.

The easiest way to find out about paid and voluntary fieldwork opportunities is to check with the archaeologists at the NSW Heritage Office in relation to any fieldwork projects that are scheduled to commence in the coming months.

The key point to remember is that if, initially, you have trouble finding paid work, do not give up. Try to negotiate a few months of volunteer work with one of the key consultancy firms or government heritage agencies, such as the NSW Heritage Office (www.heritage.nsw.gov.au), the Parks and Wildlife Division of the NSW Department of Environment and Conservation (www.dec.nsw.gov.au) or the Sydney Harbour Foreshore Authority (www.shfa.nsw.gov.au). You do not need to volunteer full-time, but the networks you make with other archaeologists and the skills that you gain will be invaluable. Another way to forge networks with the historical archaeologists of New South Wales is to join the Australasian Society for Historical Archaeology.

Above all else, remember to enjoy the diverse opportunities that will come your way when practising historical archaeology in New South Wales.

Nat Vinton wrote these tips when she was an archaeologist with the NSW Heritage Office. She now works for the Department of Environment and Conservation, NSW. She has spent the last 10 years working to improve the outcomes of archaeological research and to provide opportunities for archaeologists and the public alike to become involved in the archaeology of NSW.

References and Further Reading

- Australia ICOMOS (1999). *The Burra Charter. The Australia ICOMOS Charter for places of cultural significance*. Melbourne: Australia ICOMOS.
- Birmingham, J. & Murray, T. (1987). *Historical archaeology in Australia: A handbook*. Canberra: National Estate Grants Program.
- Camm, J.C.R. & McQuilton, J. (Eds.) (1988). *Australians. A historical atlas*. Sydney: Fairfax, Syme and Weldon.
- Kellaway, C. (1991). How to research the history of a house. In G. Davison & C. McConville (Eds.), *A heritage handbook* (pp. 197–226). Sydney: Allen and Unwin.

- NSW Heritage Office and Department of Urban Affairs and Planning (1996a). *NSW heritage manual*. Sydney: NSW Heritage Office and Department of Urban Affairs and Planning.
- NSW Heritage Office and Department of Urban Affairs and Planning (1996b). *Archaeological assessment guidelines*. Sydney: NSW Heritage Office and Department of Urban Affairs and Planning.
- NSW Heritage Office (2001). *Assessing heritage significance*. Sydney: NSW Heritage Office.
- Sagazio, C. (Ed.) (1992). *The National Trust research manual. Investigating buildings, gardens and cultural landscapes*. Sydney: Allen and Unwin.
- Sagazio, C., Kellaway, C., & McWilliam, G. (2004). Researching buildings. In C. Sagazio (Ed.), *The National Trust research manual. Trace the history of your house or other places* (pp. 5–26). Melbourne: Halstead Press and the National Trust of Australia.
- Scurfield, J. (2004). Researching buildings with maps. In C. Sagazio (Ed.), *The National Trust research manual. Trace the history of your house or other places* (pp. 35–47). Melbourne: Halstead Press and The National Trust of Australia.

Key Guides and Resources

Excellent searchable on-line sources for historical documents and pictures are available from:

- The National Library of Australia, who maintain: <http://www.pictureaustralia.org> (a collection of on-line picture resources held in various libraries across Australia), <http://www.nla.gov.au/catalogue> (their own on-line catalogue) and <http://www.nla.gov.au/oz/histsite.html> (a page detailing sources of Australian history available on line). They also have a register of Australian Archives and Manuscripts held in non-government collections available at: <http://www.nla.gov.au/raam>.
- The Australian War Memorial: <http://piction1.awm.gov.au/pls/pictionPRD1>.
- The National Archives of Australia: http://www.naa.gov.au/the_collection/recordsearch.html and http://www.naa.gov.au/the_collection/photosearch.html. You can view some documents, request documents be scanned for viewing and request hard copies of documents over the internet.
- <http://www.archivenet.gov.au/archives.html>, a general listing of web sites for all archival collections maintained around Australia, including some international archive links.

The Directory of Archives in Australia at http://www.archivists.org.au/directory/asa_dir.htm. This site is a database of 475 archival repositories across Australia, many with links to their respective web pages.

The Guide to Australian Business Records (http://www.gabr.net.au/gabr_about.html) is an online and searchable database collating the contents and locations of hundreds of historical archives relating to Australian businesses, including corporate bodies, industry bodies, and pastoral stations.

NSW Department of Planning and Heritage Council of NSW (1993a). *Historical archaeological investigations: A code of practice*. Sydney: NSW Department of Planning and Heritage Council of NSW.

NSW Department of Planning and Heritage Council of NSW (1993b). *Historical archaeological sites: Investigation and conservation guidelines*. Sydney: NSW Department of Planning and Heritage Council of NSW.

NSW Department of Primary Industries DIGS database (<http://digsopen.minerals.nsw.gov.au>). This online database contains exploration reports, cartographic, geological and topographic maps, as well as various official records produced by the old Department of Mines, such as Mine Records (individual recording forms for every known mine in NSW), research reports and survey plans.

NSW Heritage Office (1994). *Guidelines for photographic recording of heritage sites, buildings and structures* (updated 2001). Available on-line at: <http://www.heritage.nsw.gov.au/docs/info-photographicrecording.pdf>.

NSW Heritage Office (1998a). *Revealing the past: An introduction to historical archaeology*. Available on-line at: http://www.heritage.nsw.gov.au/06_subnav_02.htm.

NSW Heritage Office (1998b [1995]). *How to prepare archival records of heritage items*. Sydney: NSW Heritage Office. Available on-line at: http://www.heritage.nsw.gov.au/03_index.htm.

8

Doing Maritime Archaeology in Australia

Maritime archaeology encompasses more than just shipwrecks; it also includes the many land-based activities associated with maritime industry and trade, such as whaling stations, docks, jetties and shipyards, the intangible record (for instance oral histories), as well as the material vestiges of maritime lifestyles. It can incorporate ports and the various services that support maritime activities, such as lighthouses and warehouses, as well as the domestic sites associated with the people who lived and worked in these places. Inland waters and the material traces they contain are also part of maritime archaeology. For example, the Murray River, a major waterway which in part forms the boundary between NSW and Victoria and runs into South Australia, has a 19th century drydock, several historic port towns, and the fully conserved 105 year old paddle steamer, *PS Marion*, as well as wrecks of many other paddle steamers and barges along its length. Even the remains of the relatively recent past, such as sunken wartime relics, can become the responsibility of maritime archaeologists.

Shipwrecks are probably the most commonly envisaged maritime archaeological site, however, and there are over six thousand such wrecks in Australian coastal and inland waters. Many wrecks, while known about, have not been located; others are completely unknown. Only a relatively small percentage have been investigated and conserved by maritime archaeologists; even fewer have been excavated. In South Australia, for example, there are over 800 known wrecks, but only some 200 of these have been located and identified. While maritime archaeology in Australia is conducted by specially trained maritime practitioners, because of its time-depth and the terrestrial nature of many maritime sites, its methods and research processes also overlap considerably with the practice of historical archaeology. There is also the potential for maritime archaeology to intersect with Indigenous archaeology, as the rich ecological zones of the coastal areas have been occupied and exploited for tens of thousands of years. Coastal sites can include fish-traps, shell-middens, hearths, etc., and are usually very fragile. Any maritime archaeologist working in Australia needs to be aware of this potential, since working with Indigenous peoples requires you to follow particular ethical practices (for more information see Chapter 6).

Joe Flatman's Tips for Maritime Archaeologists

- Remember that maritime archaeology isn't just underwater and includes a lot of coastal/waterfront remains such as jetties, wharves, or quays. These can often be the best things to get involved in analyzing—anyone can do a basic survey of an old wharf or suchlike using a hand-tape, sketchbook and camera. Maritime archaeology doesn't need to include the use of costly equipment or specialized training.
- Safety is just as much an issue in land-based maritime archaeological fieldwork as in underwater. Remember to check tides and weather, access points to the site, and tell someone where you are going, and what time you will leave/return. Tell them when you get back safe too! This might also include leaving a visible note in your car saying when you left/will return. Bring all the equipment you might bring when safely doing historical archaeological fieldwork—a mobile phone or even short-wave radio when out in very remote areas, sufficient food, water, clothing, etc. and a first aid kit.
- If you're serious about becoming a maritime archaeologist and already have qualifications in archaeology or a closely related discipline, then think about enrolling in a graduate program specializing in maritime archaeology. Several universities in Australia offer postgraduate qualifications in this area, including Flinders University in South Australia, James Cook University* in Queensland and the University of Western Australia*.

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8.1. Legislation Protecting Maritime Sites

Both State and Commonwealth legislation protects underwater cultural heritage in Australia. Some maritime sites—including terrestrial sites and shipwrecks located in inland waters, bays, harbors and rivers—may be covered by general state heritage legislation (including separate acts governing marine parks and reserves) because they lie in State waters. Most shipwrecks are protected under the *Commonwealth Historic Shipwrecks Act 1976* (for more information on this act and on general State heritage legislation, see Chapter 5). This means that shipwrecks in Commonwealth waters (extending from below the low water mark to the edge of the continental shelf) that are more than 75 years old are automatically protected as designated historic shipwrecks under the Commonwealth Act. Environment Australia is the Commonwealth body responsible for administering the *Historic Shipwrecks Act 1976*, although in practice this is delegated to State agencies. There are over 6,000 declared historic shipwrecks around Australia (see Figure 8.1) that are currently protected under this act.

In addition to the protection from damage or disturbance afforded to designated historic shipwrecks, the *Commonwealth HS Act* also has a provision for declaring a protected zone around any wreck site that is deemed to be sufficiently sensitive.

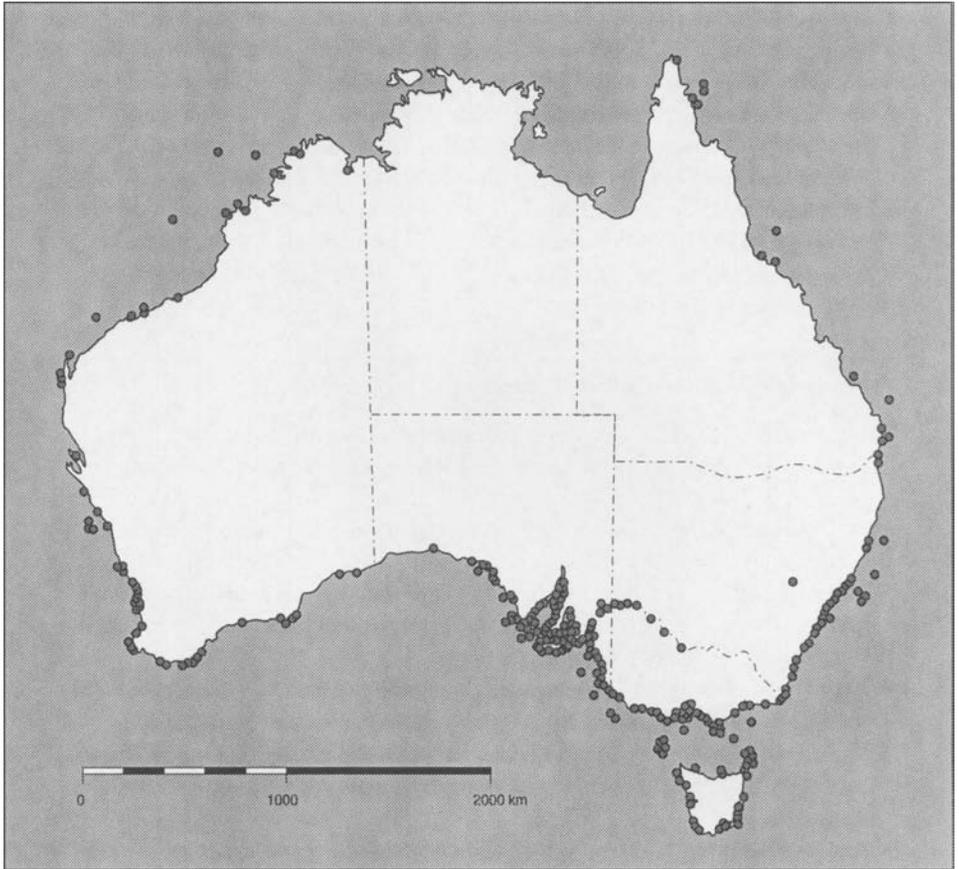


FIGURE 8.1. Locations of designated historic shipwrecks around Australia.

A protected zone is essentially an exclusion zone and entry to a protected zone wreck site is prohibited without a permit. Most protected zones will be clearly marked by a pile, buoy or warning sign and will also be marked on all Admiralty charts. Compared to the number of historic shipwrecks, there are relatively few protected zones in Australian waters. New South Wales has two, one around the *SS Duckenfield* (1889) off Long Reef near Sydney, and one around the *SS Lady Darling* (1880) between Narooma and Bermagui on the NSW south coast. Victoria has seven protected zones in Port Phillip Bay [the *William Salthouse* (1841), *Clarence* (1850), *Will O' the Wisp* (1853), *Joanna* (1857), *SS City of Launceston* (1865), *Hurricane* (1868) and *Cerberus* (1926)], and one Commonwealth Protected Zone near Port Albert on the east coast around the *Clonmel* (1841) site. With the exception of the *William Salthouse* (1841) and *Hurricane* (1868), all of these sites are off-limits to diving, fishing and boating. With the longest coastline of any state in Australia, it is not surprising that Western Australia has the largest number

of shipwrecks, although it only has one protected zone around the wreck of the *Zuytdorp*, sunk in 1712. South Australia also has only one protected zone, around the *Zanoni* (1867), south-east of Ardrossan. Queensland has six protected zones, around the *Aarhus* (1894), *Foam* (1893), *HMS Pandora* (1791), *SS Yongala* (1911), *Gothenburg* (1875) and *QGS Llewellyn* (1919). Other declared protected zones in Australian waters include the *Emden* (sunk in 1914 in the Indian Ocean), the *I-124* (a Japanese submarine in Northern Territory waters), and the *Cato* and *HMS Porpoise* (both wrecked in 1803 in the Coral Sea and located within the same protected zone managed by Queensland). Tasmania is the only state not to have any declared protected zones at present.

Responsible Diving: Tips for Protecting a Wreck Site

- If you're intending to dive and explore an historic wreck site, make yourself familiar with the legislation which protects these sites before you do anything else.
- Do not interfere with the site and avoid any accidental or deliberate damage to the wreck from your anchor or dive gear.
- Remember that the types of shipwreck sites and the surrounding sea conditions can vary greatly, so careful planning and an appropriate level of experience are essential to ensure a safe dive.
- Avoid careless actions, such as excessive finning or grabbing the structure in strong currents, both of which can cause irreversible damage to the site.
- For the same reason, uncovering parts of the wreck site by digging or "hand-fanning" the deposit exposes wreck material and accelerates corrosion and decomposition.
- Anchors are a major threat to historic wrecks, tearing the structure, accelerating corrosion and destroying marine life. Boat operators should follow recommended anchoring procedures and take care that anchors are not dropped onto a wreck.
- Report any newly discovered wrecks or the possession of a shipwreck artifact to the relevant heritage authority immediately.

From: Department for Environment and Heritage, South Australia (2002b).

Apart from the protection of the Commonwealth act, some specific State legislation also governs the particular protection of shipwrecks and related sites. Western Australia and South Australia are the only states to have specific maritime archaeology or shipwreck legislation. *The Western Australian Maritime Archaeology Act 1973* protects all wrecks, associated relics and terrestrial sites associated, occupied or used by anyone assumed to have sailed in an historic ship that was lost or abandoned before 1900. Under the blanket protection of this act, all such sites qualify as maritime archaeological sites. Under this act some archaeological sites, such as jetties, that are linked to maritime trade in Western Australia have been declared to be "maritime archaeological sites". *The South Australian Historic Shipwrecks*

Act 1981 has recently been rewritten to bring it into line with the Commonwealth Act, and now automatically protects all shipwrecks and associated material that have been in State waters for 75 years or more. Shipwrecks younger than 75 years can still be protected under this act, although this must be decided on a case by case basis. Under both the *WA AMA Act* and the *SA HS Act*, protected zones can be declared around particular wrecks in order to protect them and their contents. Although targeted specifically at protecting underwater cultural heritage, such legislation narrowly defines a wreck site as a shipwreck, which renders it less effective at protecting other forms of underwater cultural heritage such as sunken aircraft (Staniforth, 2002).

All other protection afforded to underwater and maritime sites comes from general state heritage legislation (see Chapter 5 for more detail on State Acts). Under such Acts, shipwrecks less than 75 years old and located in inland waters may be protected if they also meet the definition of “relics” (e.g. in New South Wales they would be defined as a relic if they were older than 50 years, in Queensland, they would be defined as a relic if they were older than 30 years). Any wreck with either historic shipwreck or relic status cannot be disturbed or altered without a permit issued by the relevant heritage agency. The artifacts from such wrecks are also protected, extending even to broken items washed up on a beach a long way from a wreck, so bear this in mind when surveying or recording sites. Under both Commonwealth and State heritage legislation all new wreck sites must be reported to the relevant authority (Commonwealth and State). Under Victorian legislation (the *Heritage Act 1995*), finders of shipwrecks or associated relics are eligible to receive a special award and in exceptional instances a financial reward may apply. Similar provisions are active in South Australia and Western Australia, which also offers the potential for reward in the event of discovering a wreck sunk prior to 1900.

8.2. Sources of Information

8.2.1. *General Background Information*

Much of the research required for maritime archaeological purposes is similar to the primary documentary research conducted by historical archaeologists. The documentary record of maritime trade and industry and the personal lives of maritime workers and their families can be found in the same range of repositories (e.g. state libraries, or state and national archives; for more information on primary documentary sources for Australian research, see Chapter 7). In terms of historical documents, both newspapers and shipping records will give you much specific maritime information that may be relevant to archaeological research. Newspapers often note shipping movements, along with information on cargo and passengers, as well as occasional news of shipping disasters and wrecks. Shipping records will give more detailed information on ship movements and may be useful if you are tracing the voyages of a particular ship. Often such records won't provide all the information you'll be seeking; they may indicate only the date a ship left a particular port and the date it returned, for example, so you will need to read between

the lines to understand what this might mean. For example, if the ship was known as a whaling vessel, the time period which it was away from port may give you some indication of how far it travelled, and the season it was absent may be a clue as to whether or not it was engaged in whaling and related activities.

The Australian National Maritime Museum*, the Western Australian Maritime Museum* and the Museum of Tropical Queensland* are the three major locations for substantial maritime archaeological research and publication in Australia. These institutions contain large and important museum collections of maritime artifacts and conduct ongoing research into shipwrecks and associated maritime sites (for more information see Hosty [2006]). There are also some smaller State and Territory-run museums with an interest in maritime history and archaeology, and numerous private or community-based maritime museums in Australia, although the standards of research and presentation at these latter facilities vary considerably. The Australian Museums On-Line Database can provide a listing of specialist maritime collections.

Other sources of general background information include the website of the NSW Heritage Office, which maintains a listing of useful data for introducing you to the background of shipwrecks in Australian waters. This material includes graphs of wrecks according to country built, rig, construction type, region, industry, decade and month.

8.2.2. *Shipwreck Location*

The first place to look for information on a particular shipwreck is the Australasian Institute of Maritime Archaeology. AIMA is dedicated to promoting maritime archaeology and to publishing the results of maritime archaeological work. An important AIMA initiative has been development of the web-based Australian National Shipwreck Database (available at <http://eied.ea.gov.au/nsd/public/welcome.cfm>). This is constructed from data collected by each of the State historic shipwreck agencies and contains information on all known shipwrecks. Furthermore, the database makes it possible to search for historic shipwrecks by date, state, location or ship's name. A second step to obtaining information on a particular wreck is to contact the government heritage agency in the relevant State or Territory. State or Territory agencies can provide the most up-to-date information about a particular shipwreck and will also maintain databases for their own State or Territory.

8.2.3. *Maritime Artifacts*

Some maritime agencies maintain on-line and publicly available databases of artifacts from excavated sites. The Department of Maritime Archaeology at the Western Australian Maritime Museum, for example, has an artifact database from seven sites, including the oldest known wrecks in Australian waters, such as the *Trial*, sunk in 1622 (see <http://dbase.mm.wa.gov.au/artefacts/artefacts.php>). A similar initiative is available from Heritage Victoria, who have compiled

a database of artifacts from two of Victoria's most significant historic shipwrecks: the *SS City of Launceston* (1865) and the *PS Clonmel* (1841) (see <http://www.heritage.vic.gov.au/page.asp?ID=270>). Other, individual wreck catalogs are curated by various museum bodies, such as the Queensland Museum* (through its branch the Museum of Tropical Queensland) which has an on-line catalog of excavated artifacts from the *HMS Pandora* (1791). These catalogs typically include both images and descriptions of the artifacts (which can range from ship's fittings, to glassware, ceramics, bottles and personal effects) and can be very useful for comparative purposes. For more information on significant Australian maritime artifact studies, see Staniforth (2006).

8.3. Ethical Issues in Maritime Archaeology

Ethical issues in maritime archaeology are no less thorny than those in any other field of archaeological endeavor. Maritime archaeology in Australia supports the terms of the *UNESCO Convention on the Protection of the Underwater Cultural Heritage* (UNESCO, 2001) and in all cases the actions of maritime archaeologists should be guided by the AIMA Code of Ethics, which sets out accepted principles to guide practice.

8.3.1. Qualifications

As with terrestrial archaeology, to practice in Australia as a maritime archaeologist you will need an Honours or other postgraduate degree in maritime archaeology, although a general archaeological degree is also acceptable, as long as you have a major in maritime archaeology. It is not considered adequate simply to have a terrestrial archaeology degree, even in a closely related field such as historical archaeology. Two and a half years of professional experience in maritime archaeology is considered commensurate with university qualifications, although the key issue here will be familiarity with the Australian situation (see the AIMA Code of Ethics in Appendix 2). It may also help if you have worked as a volunteer on a shipwreck project. In short, to be regarded as a maritime archaeologist in Australia, you need (Coroneos, 2006:116):

- Archaeological training.
- Familiarity with the Australian situation.
- An understanding of the underwater environment.

One avenue for becoming familiar with maritime archaeology is through the joint AIMA/NAS training initiative from the Australasian Institute for Maritime Archaeology (AIMA), in conjunction with the Nautical Archaeology Society (NAS) of the United Kingdom. AIMA/NAS training is an avocational program designed to give members of the public sufficient background knowledge and understanding to enable them to assist with maritime archaeological projects. It has been designed by archaeologists to introduce people to the basic archaeological skills required

of underwater archaeology. This course is run in modular components: Part I is an introductory training session, for which no prior diving expertise is required; Part II is a more in depth survey/day school session; Part III the accumulation of extra contact hours through field schools; and Part IV, the presentation of a portfolio, including a report to publication standard. On completion of Part I you will receive one year's associate membership in AIMA. AIMA/NAS training is an internationally recognized course and is currently in use in the UK, South Africa, Canada and the USA.

To be involved in maritime archaeology in Australia you don't need to be able to dive. If you do dive, however, you do need to be able to do it to an acceptable international standard. Many SCUBA training organizations offer courses that are internationally recognized (such as CMAS [the Confédération Mondiale des Activités Subaquatiques], PADI [the Professional Association of Diving Instructors], SSI [Scuba Schools International], or NAUI [the National Association of Underwater Instructors]), but standards of training can vary. You need more than a so-called "resort" course to be able to handle the requirements and conditions of occupational diving. As a first step it is a good idea to have had some form of medical check-up before you dive, to ensure that you have been passed fit by a doctor who knows about the physiology of diving; people with a history of asthma generally do not pass a standards-approved dive medical.

Roy and Mitch's Boating Tips

Australia can be a harsh environment to operate in, and this includes the marine environment. Because Australian waterways can be dangerous and unpredictable, it is essential that you follow some basic rules in order to enjoy your time in these places, and also stay safe and secure.

- There are different rules governing boat operations in each state in Australia. In NSW, for example, you will need a boat licence if you wish to operate a vessel that is going to be driven at speeds of 10 knots or greater. Also, you will need to wear a personal flotation device (PFD) when crossing a coastal bar in NSW, while in Victoria you are required to wear a PFD at all times when underway in a vessel under five meters in length. It is best to find the relevant waterways (governing authority) website for the state in which you will be working to get information on the different rules governing the operation of a water vessel on either open or enclosed waters. The NSW state government's maritime regulator responsible for ports and waterways is NSW Maritime, formerly the Waterways Authority (see <http://www.maritime.nsw.gov.au>).
- The temporary recognition of boating licenses is available to visitors from overseas. In NSW, a new license is not required if you hold and carry a valid current license or permit to drive a vessel of the same type issued under the legislation of another State, Territory or country. Remember, however, it is essential to carry your license with you when boating in NSW.

- A coastal bar is a shallow sand bar that forms at the point where rivers, creeks, lakes or harbors meet the sea. A PFD needs to be worn when crossing coastal bars in a boat as this can be a dangerous manoeuvre. You should only cross these bars if you have a full understanding of the correct way to navigate through these areas. A run-out tide is the most dangerous tide in which to attempt to cross a coastal bar in a boat. You should seek advice through the relevant waterways authority and any literature that they have available or from experienced vessel operators. Some are worse than others, so ask the locals for their advice in these matters.
- A close eye on the weather is important when operating in marine environments. A good website for this information while in Australia is www.bom.gov.au.
- Gain local information and knowledge by relying on the “locals”, such as fishermen, fishing club organizations, surf clubs and local Coastal Patrol organizations. These organizations are mostly run on a voluntary basis, but they will be more than happy to help out. These people are likely to have been involved with their local waters for the majority of their lives and so will have valuable knowledge to pass on.
- Boating maps can be ordered online for a nominal fee (e.g. <http://www.maritime.nsw.gov.au/maps.html>). These are an essential tool for negotiating Australian waterways and include handy hints for safe boating. They are printed on special waterproof paper and can be viewed online prior to purchasing.
- Unless you are very experienced yourself, our main tip is to engage the services of experienced crews, whether they be boat or charter operators or professional diving instructors. These people will be able to keep you safe and provide you with professional help.

Common words and terms used in the Australian marine environment

- “Pull the pick”—(raise the anchor)
- “Drop the pick”—(lower the anchor)
- “To berley up”, “have a spit” or an “up and under”—(to vomit due to sea sickness)
- EPIRB—(Emergency Position Indicating Radio Beacon)
- Bommie—(a shallow area of rocks where waves may break)

Roy and Mitch Willis are father and son award-winning fishermen from the South Coast of New South Wales.

8.3.2. Working with the Diving Public

As in other countries, shipwrecks and other underwater cultural heritage in Australian waters can form important aspects of recreational activities, such as sportsdiving. Although the interpretation of such sites is equally significant to the

non-diving public, dive tourism is one of the fastest growing recreational industries in Australia, particularly in the spectacular tropical waters of northern Australia, such as the Great Barrier Reef. Pressures from recreational divers on shipwreck sites can be immense, and can include the removal or relocation of artifacts, the disturbance of covering archaeological deposits, deterioration arising from care-less diving, and accelerated corrosion caused by air pockets trapped inside wrecks as a result of scuba diving.

All state heritage agencies encourage the visiting of underwater sites for recreational purposes, although this visitation must not disturb the site in any way. Any activities that could result in the disturbance of a site (including research and survey) may only occur within certain guidelines. If the site is located within a protected zone, as declared under the *Historic Shipwrecks Act 1976* or the WA or SA State Acts, a permit will be required prior to entry. If the wreck is located within a Marine Park, separate permission will have to be sought from the relevant Marine Parks Authority. As with land-based sites, all excavation or artifact recovery is closely governed by ethical and legal obligations. Such disturbance must be guided by proper archaeological methods: accurate recording, careful materials conservation, detailed data analysis, professional report preparation and the arrangement of public access to any resulting collection. Any disturbance to underwater sites that are not designated historic shipwrecks, but that are still protected under state heritage legislation, will require permission from the relevant state heritage agency, in the same way as you would apply to disturb a terrestrial site (see Chapter 5, Table 5.2). If you notice any recent unauthorized disturbance to a wreck or associated site, you should notify the relevant State government authority as soon as possible.

8.3.3. *Obtaining an Excavation Permit*

As with terrestrial archaeology, you cannot conduct any intrusive archaeological work on a maritime site without an excavation permit. The means for issuing such permits will be determined by the standards of the relevant heritage authority, but, as with terrestrial archaeology, will only be issued to suitably qualified persons. In NSW, for example, permits for recovery and excavation will only be considered if (NSW Heritage Office & NSW Marine Parks Authority, 2002):

- The proposed project is directed by a qualified archaeologist who has successfully completed graduate studies in maritime archaeology, or who has equivalent qualifications and experience.
- Two referees who qualify under these criteria affirm the suitability of the supervising maritime archaeologist.
- The project adheres to the principles of the Australasian Institute for Maritime Archaeology's (AIMA) code of ethics.
- An appropriate research design brief has been prepared.
- Adequate conservation and storage facilities are available for the project.
- There is adequate funding for the project.

- The application is accompanied by a supporting letter from the Marine Parks Authority.

The responsible management of underwater sites around Australia is guided by the Code of Ethics of the Australasian Institute for Maritime Archaeology, which can be downloaded at: <http://aima.iinet.net.au>.

Diving Health and Safety in Maritime Archaeology

The most important health and safety issue in maritime archaeology is safe diving practice. Even though you don't have to be a diver to work in maritime archaeology, if you are going to dive, then do it properly. If you are serious about working as a maritime archaeologist, you will need to be aware of the difference between recreational and occupational diving. In some States if you are diving on an archaeological project—regardless of whether you are diving as a paid employee or a volunteer—you will need specific training in order to qualify as an occupational (or “scientific”) archaeological diver. In short, anyone who is diving as part of their work must be certified according to the Australian Diver Accreditation Scheme (ADAS) as a Commercial diver to Australian Standards 2815. Divers must also have a current diving medical certificate supplied by an approved AS 2299-qualified medical doctor, and must also hold a current Diving First Aid Certificate. Every diver “at work” must also keep an AS2299 Diver Log Book that is available for inspection both during work and by the doctor performing the medical examination. For more information on Australian diving standards and requirements, including ADAS' policy on accrediting overseas or previous experience, see the Australian Diver Accreditation Scheme website: <http://www.adas.org.au/information/200398332.htm>.

References and Further Reading

- Coroneos, C. (2006). The ethics and values of maritime archaeology. In M. Staniforth & M. Nash (Eds.), *Maritime archaeology. Australian approaches* (pp. 111–122). New York: Plenum/Springer.
- Department for Environment and Heritage (2002a). *Shipwreck guidelines 1—Anchoring on shipwrecks*. Adelaide: Department for Environment and Heritage.
- Department for Environment and Heritage (2002b). *Shipwreck guidelines 2—Diving shipwrecks*. Adelaide: Department for Environment and Heritage.
- Henderson, G. (1986). *Maritime archaeology in Australia*. Nedlands, WA: University of Western Australia Press.
- Hosty, K. (2006). Maritime museums and maritime archaeological exhibitions. In M. Staniforth & M. Nash (Eds.), *Maritime archaeology. Australian approaches* (pp. 151–162). New York: Plenum/Springer.
- Staniforth, M. (2002). Assessing the significance of Twentieth century underwater heritage. In D. Jones (Ed.), *Twentieth century heritage: Our recent cultural legacy. Proceedings of the Australia ICOMOS national conference 2001* (pp. 145–149). Adelaide: School of

Architecture, Landscape Architecture and Urban Design, University of Adelaide, and Australia ICOMOS Secretariat.

Staniforth, M. (2006). Artifact studies. In M. Staniforth & M. Nash (Eds.), *Maritime archaeology. Australian approaches* (pp. 27–40). New York: Plenum/Springer.

Key Guides and Resources

The Australian Institute of Maritime Archaeology's website (<http://aima.iinet.net.au>) is the best first resource for investigating maritime archaeology as it is practiced in Australia.

Among other things the AIMA website contains a list of legislation relevant to maritime archaeology.

AIMA and the Australian Cultural Development Office (1994). *Guidelines for the management of Australia's shipwrecks*. Canberra: Australian Institute for Maritime Archaeology and the Australian Cultural Development Office.

The Maritime Heritage of New South Wales website has a wealth of useful background material, including a bibliography of relevant research resources at http://maritime.heritage.nsw.gov.au/public/research.cfm?words_id=73&showme=1.

NSW Heritage Office (1994). *Underwater heritage - Principles and guidelines*. Sydney: Heritage Office. Reprinted 1996.

NSW Heritage Office (1997). *Shipwreck atlas of New South Wales*. Sydney: Heritage Office. This includes 25 charts showing the location of known shipwreck sites along the State's coastline and a list of other vessels lost.

NSW Heritage Office (2002). *Marine Park shipwrecks and other underwater relics: Management principles*. Sydney: NSW Heritage Office and NSW Marine Parks Authority. Shipwreck atlas for South Australia: <http://www.atlas.sa.gov.au>.

9

Conserving and Managing Cultural Heritage

Much archaeological fieldwork in Australia is carried out within the confines of cultural heritage management projects—the “business” of archaeological consultancy. Cultural heritage management (sometimes referred to as cultural resource management) is the branch of archaeology that deals with assessing the effects of development or other potentially harmful human activity on heritage sites, and taking steps to either protect sites or to allow their destruction. The standard process for any archaeological consultancy project is to investigate a site or area, record any artifacts or relevant sites within it, and then assess the significance of those sites or relics so that appropriate strategies for conserving and managing them can be implemented. Significance assessment, conservation and management, therefore, are the three key skills that an archaeologist must cultivate if they are to work successfully in this field. Specialist non-Indigenous personnel who have undertaken specialist training as part of archaeology, anthropology, natural resources or land management degrees have traditionally practiced cultural heritage management. The current demand for cultural heritage management by Indigenous peoples not only requires a recognition of their specific needs and requirements, but also the general higher priority given to the protection and management of the physical remains of the past by Indigenous peoples.

One of the main tasks of cultural heritage management is to assess which heritage sites are important enough to preserve and why, and which are not (and why). This requires an understanding of the process of assessing cultural significance, or those aspects of a place that make it of value to society. The entire Australian conservation community, including non-government organizations such as the National Trust, follows the Burra Charter model for assessing cultural significance and conserving places of cultural significance. The Burra Charter is the informal nickname given to the *Australian ICOMOS Charter for the Conservation of Places of Cultural Significance* (1999), prepared by the Australian National Committee of the International Council on Monuments and Sites* (Australia ICOMOS). The Charter was developed as the local response to issues which arose in the original Venice International Charter for the Conservation and Restoration of Monuments and Sites (1964). Its nickname derives from its initial preparation at a meeting in Burra, South Australia, in 1979, although it has been refined several times since then. The current

version is available on line at: <http://www.icomos.org/australia/charter.html>. The Burra Charter codifies two interrelated aspects of best heritage management practice:

- The categories of cultural significance that are relevant in the assessment of heritage places and sites.
- The conservation standards and attitudes that are expected in the practice of good cultural heritage management.

In addition to the Burra Charter, various bodies—most notably the now-defunct Australian Heritage Commission—have attempted to quantify thresholds and other mechanisms for assessing how significant a place might be in an attempt to lessen the subjectivity of the assessment process. In other words, once you understand the categories of the Burra Charter, you then need to go one step further and think about how to assess a place that might fall within one or more of these categories. Not all places are equally significant, so how important does a place have to be to require further management? What is the threshold for arguing that a place has a level of state significance (i.e. important to the state as a whole) rather than regional or local significance? What kinds of attitudes/values do these categories encompass and how can you measure them? Not all of these questions can be answered easily, of course, and the assessment process is always being refined. As a result, this chapter can only provide an outline of the process as it is practiced in Australia, focussing on how significance is assessed under the Burra Charter, what its principles are, and some of the ways in which you can realize this process at an actual site or place.

In essence the process for any cultural heritage management assessment is as follows:

- Decide on what categories of cultural significance are relevant, why and how.
- Grade the significance of components or aspects within each of these categories (i.e. assess relative degrees of significance).
- Assess competing or shared claims to significance and/or differences of opinion about the meaning of the place.
- Draft a statement of significance that describes the outcomes of this process.
- Draft appropriate conservation policy based on the statement of significance (a conservation plan).
- Draft practical management strategies based on this policy (a management plan). This may include evaluating how to accommodate competition over values in management and interpretation.

9.1. The Burra Charter Model for Assessing Significance

There has been much effort over the last 20 years devoted to what criteria are essential for assessing cultural heritage significance, what precisely these criteria entail,

and how sites may be measured against them. Under the Burra Charter model, cultural significance in Australia is customarily assessed in terms of four main categories: aesthetic significance, historical significance, scientific or research (in many cases archaeological or technical) significance, and social significance. These categories are overlapping and none is mutually exclusive: a site which has historic significance can also possess aesthetic significance as part of its locale, or scientific/archaeological significance if it can also contribute to archaeological or other research studies. It is also possible, of course, for the one site to possess significance for both Indigenous and European people, or to possess different types and levels of significance amongst different sectors of the community. In fact, current thinking advises against keeping categories of significance separate, as this may obscure competing values and prevent the sharing of heritage values (see “A Colonial Past for a Multi-cultural Australia” in Chapter 7).

9.1.1. Aesthetic Significance

This is one of the hardest categories to evaluate, as almost everyone has their own idea of what is visually pleasing. In addition, there is a general recognition that aesthetic significance is a Eurocentric concept which may remain quite alien to Indigenous cultures. In an attempt to break away from narrow or conventional—and certainly Eurocentric—definitions of “pretty” or “beautiful”, the Australian Heritage Commission’s working group into identifying and assessing aesthetic value have defined it very broadly as “the response derived from the experience of the environment and cultural attributes within it. This response can be to visual or non-visual elements and can embrace emotional responses, sense of place, sound, smell and any other factors having a strong impact on human thoughts, feelings and attitudes” (Paraskevopoulos, 1994:81). This hints at some of the problems inherent in trying to capture aesthetic significance: it is a product of a powerful emotional experience rather than a checklist of attributes.

The qualities which might be considered as part of aesthetic significance have been most clearly set out by James Semple Kerr as the formal or aesthetic qualities of a place which make it visually pleasing (Kerr, 1985:10–11). Kerr argues that aesthetic significance can be assessed in terms of the individual elements present at a place, in terms of the unity of scale, materials, texture and color that is evident between elements, in terms of the degree of contrasting elements which may or may not be disruptive, or in terms of the entire landscape setting in which each of these elements combines to produce an overall impression (Kerr, 1985:11). Of importance in assessing aesthetic significance is the degree to which a place has a relationship between its parts and its setting that reinforces the quality of both (Kerr, 1985:11).

Obviously, many archaeological sites will be sub-surface and therefore not able to be assessed on aesthetic criteria. You will need to decide on a site-by-site basis whether aesthetic significance is a relevant category to assess, rather than taking this as a given.

9.1.2. *Historical Significance*

Historical significance relates exclusively to the period of European occupation of Australia, although it does not refer exclusively to European archaeological material (for example Indigenous-European contact sites may possess significance under this category). Such significance is commonly identified in terms of a set of themes which relate to such influences as an historic figure, phase or activity. More specifically a place may have historical significance because it typifies past practices, or because it may be the site of an important event (Kerr, 1985:26; Pearson, 1984:32).

The Australian Heritage Commission (2001) has developed a range of generic historical themes applicable to Australia as a whole. These are intended to apply to all places at all levels of significance—local, regional, state or national—and aim to stimulate you to think more widely and help make comparative assessments. Some states (such as NSW and Qld) have adapted these national themes to produce sets of complementary state historical themes that you should also make yourself aware of if you are working in either of these states. Any of the government bodies that administer cultural heritage matters in an Australian state should be able to give you a copy of the state themes.

9.1.3. *Scientific (Archaeological) or Technical Significance*

This is an assessment of the research potential of a site and the relevance of any data the site might contain for the pursuit of academic research questions. Bear in mind that the research questions may well be applicable beyond the context of the single site being studied (Schiffer & Gummerman, 1977; Pearson, 1984). Significance under this category includes the research potential of the site itself and its representativeness within a wider suite of known sites. The project archaeologist, in cooperation with the Indigenous community, normally determines the scientific significance of Indigenous heritage sites. Ideally, scientific significance is evaluated in terms of a detailed research design focussed on some aspect of past Indigenous lifeways. If a site can be demonstrated to contain information important for addressing issues in the research design, a defensible evaluation of scientific significance can be made.

Scientific significance is also concerned with the potential of a site to address anticipated future trends in academic research interests and should take into consideration the issue that future research capabilities and interests cannot be predicted with any accuracy. Since it is impossible to anticipate all research questions, it is also difficult to identify and conserve suites of sites that may be capable of addressing all future research problems. To avoid the problem of using specific research designs to evaluate sites, the concept of “representativeness” was advocated in Australia as an additional consideration for evaluating scientific significance (Pearson, 1984:2). According to this concept, identifying and preserving a representative sample of the complete range of site types in an area can conserve an adequate data set for all present and future research designs.

There is no nationally set threshold for archaeological significance, partly because the issue of what constitutes an archaeological “research resource” is still highly debated. One guide that may help you to decide whether a site is of archaeological significance rests on its ability to answer three questions (Bickford & Sullivan, 1977:23–24):

- Can it provide information not available from other sources?
- Can it provide information not available on other sites?
- Can it answer pertinent research questions?

9.1.4. Social Significance

The significance of any site in terms of its social value lies mainly in its association with a particular recognizable community, or parts of a community. Social significance is often defined in terms of the degree of contemporary community esteem which is attached to a place and aims to establish whether, for example, damage to the site or its contents would cause the community a sense of loss, or whether the site contributes to a sense of community identity (Johnston, 1994). To meet the National Estate threshold for social significance a site must be both well known and highly valued, have a long history of association, or be valued as a landmark or community signature (i.e. a place people identify with as part of who they are, such as places they show to visitors, or places that everyone recognizes as a landmark). Social significance can also be assessed in terms of representativeness and rarity, in light of whether the place represents a seminal or optimal example of a class of items which is valued by a community, or whether it is a scarce example of a particular style, custom or human activity which is esteemed by a community.

Whenever you assess social significance you will have to make a decision about who constitutes “the community”. It is not necessarily going to be simply all the people who live in a particular area, because some sectors of this geographic community may be unaware of a place, or may value it completely differently to others. Conversely, if a place is a popular recreational destination, for example, it may be of value to a much wider community than simply the people who ordinarily live there. Holiday makers may come from all over to visit it, making the community who value it much broader.

When assessing how socially significant a place may be, ask yourself these questions:

- Is it widely known amongst the community?
- Is it highly valued by members of the community?
- Has it been known and valued for a long period of time?
- Does it have symbolic value as a local landmark or icon which people identify with?

Answering “yes” to one or more of these questions means the place has social significance. Assessing how large the community is who value it will give you some guide as to how significant it may be.

9.2. Writing a Statement of Cultural Significance

A statement of cultural significance is the summary of the outcome of the cultural significance assessment process. It indicates why a place is important (i.e. what its historic, social, technical or aesthetic values are), who holds these values, and explains in detail the nature and relative degree of importance of these values. There is no set formula for writing one, but the *Protecting Heritage Places Workbook* (2001:39–40), has these tips to keep in mind:

- A statement of significance should be concise, easy to read, and address all of the heritage values of a place.
- It should present the overall significance of a place in a summary statement and then support this summary with subsidiary statements for specific features or aspects.
- It should indicate clearly the gaps in the available information, so that the basis for the assessment can be clearly understood.
- It should refer to, or cite, evidence supporting the assessment to ensure that the statement is credible.
- For Indigenous places the voices of the appropriate Indigenous people should be clearly expressed in their own words.

You can find examples of statements of significance in the literature, including in the *Protecting Heritage Places Workbook* (2001). Another excellent source of comparative significance assessments is previously prepared consultancy reports held in administering authority and other specialist libraries (but make sure you know which are the good ones). The National Trust (particularly their head office), for example, is likely to hold a library of consultancy reports, as will government departments such as the EPA in Queensland or the Office of Environment and Heritage in the Northern Territory. All government administering bodies keep copies of reports that have been submitted to them, although the standards of such reports may vary. As you can imagine, not all reports submitted by consultants are good, therefore exercise caution when reading and accepting the recommendations or assessments in previous reports. The other drawback of such collections is that they are often open only at certain times and are unlikely to contain every archaeological report ever written and submitted.

Using the New South Wales Heritage Office Library

The Heritage Office library is a great resource that holds over 9000 items. Officially, the Heritage Office requires two printed copies of archaeological assessments and research designs to be submitted with section 140 applications. The NSW Heritage Office is monitoring compliance with conditions of consent more closely now through a database which makes it possible to track deadlines for the submission of final excavation reports. As a result of this and the establishment of the library, more reports on

archaeological investigations are available to the public. Also compliance with conditions of consent, including the submission of final reports, has been written into the Heritage Council-endorsed Excavation Director Assessment Criteria at <http://www.heritage.nsw.gov.au/docs/excavationdirectors.pdf> (see Basic Qualifications/Experience, No. 4). This means that if archaeologists are not submitting their final excavation reports to the Heritage Office, then they may not be approved as excavation directors on future section 140 and section 60 applications. In sum, this will ensure a healthier looking library that will be a great source of good archaeological reports. If a report is not in the library, but sits in our files, our tenacious Librarian will search them out where possible. The Heritage Office Library is open Mondays, Wednesdays and Fridays, by appointment (for more information go to http://www.heritage.nsw.gov.au/10_subnav_00.htm).

Notes kindly supplied by Yvonne Kaiser-Glass for the NSW Heritage Office.

9.3. The Burra Charter Model for Conservation

Once a place is identified as culturally significant, it usually follows that it needs to be preserved or conserved in some way. This is often done as a two-part process: firstly outlining the conservation objectives that arise from the statement of cultural significance; and secondly, providing guidelines for managing the site in line with these objectives. A conservation plan is the name for the document outlining a policy for protecting features that have been recognized to be of cultural heritage significance. Stemming from a detailed significance assessment of the site, conservation plans set out objectives that should be met in the more detailed, and subsequent, day-to-day management of the site. The most useful guide for understanding how to prepare a conservation plan is James Semple Kerr's, *The Conservation Plan* (2000), available from the National Trust. A management plan is the stage subsequent to a conservation plan and entails setting out the details of how to realise the conservation plan's objectives. This will normally involve considering the practical, political, and economic circumstances that have a bearing on the place and how best to deal with these while continuing to conserve the site successfully.

The Burra Charter's approach to conservation revolves around five principles:

- The significance of the fabric of a place must be respected (i.e. don't replace any original fabric unless there is no other alternative). "Fabric" is all of the physical material of the place: on an historic mine site, for instance, this would include the mine equipment, shafts and adits, the construction materials of the mine buildings, the waste products from the mining process which are still on site and any archaeological materials (either on the surface or sub-surface). Sometimes the setting of the site can also be defined as fabric, particularly if the surroundings are an integral part of the site's cultural heritage significance.

- Intervention in the fabric of a place must be kept to a minimum (i.e. do as little as possible, but as much as is unavoidably necessary).
- Treatment must be reversible, so that whatever is done can be undone with little or no damage.
- The site and its significance must be understood as fully as possible before making any decisions about its future use or any changes to its fabric.
- All actions at all stages of the process must be fully documented, including the rationale behind them, so that the complete history of the place and its treatment can be known and referred to at any time.

As part of dealing with the conservation issues that arise on any site assessed as having cultural heritage significance, the Burra Charter is concerned with codifying how places can be managed responsibly and well. Managing a site can involve any combination of seven separate, but closely related, practices (Australia ICOMOS, 1999:6–8):

- Conservation, or all of the processes of looking after a place which will retain its cultural significance. The main processes are maintenance, preservation, restoration, reconstruction and adaptation.
- Preservation, which means maintaining the fabric of a place in its existing state so that it does not deteriorate.
- Restoration, which means returning the existing fabric of a place to a known earlier state (e.g. a particular historic time-period) by removing newer material or by reassembling existing components without introducing any new material.
- Maintenance, which means the continual protection of the fabric, contents and setting of a place as it exists at that point in time. This should not be confused with repair, which may involve restoration or reconstruction.
- Reconstruction, or returning a place as nearly as possible to a known state by introducing outside materials (either new or old) into the fabric. A reconstruction should always be based on solid and thorough research and should never be conjectural. If you don't know or are not sure what went where, then you cannot reconstruct it.
- Adaptation, which means modifying a place to suit proposed compatible uses, such as when an historic building is modified to become a museum.
- In addition there is also destruction, which involves the removal of part or all of the site. This still needs to be done under the aegis of management, in that the rationale for allowing a site to be destroyed still has to be established as an acceptable solution and alternative options considered.

For an excellent explanation on how these different processes have been successfully employed on many individual sites and the variations that are possible see Marquis-Kyle's and Walker's (2004) easy to read guide, *The Illustrated Burra Charter*. This gives a clear and detailed treatment of each of the Burra Charter's significance and conservation principles and also considers some of the issues that have arisen from applying them to actual sites. *Understanding the Burra Charter*,

produced by the Victorian Heritage Council in 1998, is another useful overview of the Charter's principles.

Site conservation strategies should be dependent on the site's level of significance and the level of risk that is apparent from use, development or daily wear and tear. An assessment of risk should be based on careful consideration of a variety of factors, including the physical and spatial integrity of individual items contained within the site, the spatial relationships between objects and groups of objects and the general context of the site as a whole within the landscape. Put more simply, what factors are likely to damage or destroy the site and how quickly is this likely to occur?

The Australian Heritage Commission was one of the main organizations responsible for co-coordinating how the Burra Charter model is applied in practice. Although it has since become the Australian Heritage Council, it still takes on an important role in directing how the archaeological profession undertakes the process of site significance assessment. To this end the AHC offers numerous published guides—many of them freely available for download from the internet—that can assist you in the process of assessing significance at different types of site, and of assessing different types of significance. The most useful guides are:

- The *Protecting Heritage Places Kit* (2001): <http://www.heritage.gov.au/protecting.html>) and the *Illustrated Burra Charter* (Marquis-Kyle & Walker, 2004). These are obviously the best starting places to familiarize yourself with the entire process. From there, you can expand into:
- *Conservation Management Plans: A checklist* (NSW Heritage Office, 2003), which is a useful tool if you have to prepare a CMP.
- *Mining Heritage Places Assessment Manual* (Pearson & McGowan, 2000), which deals specifically with the range of mining sites across Australia and issues to do with their assessment.
- *How to Prepare Archival Records of Heritage Items* (NSW Heritage Office, 1995, revised 1998), which contains guidelines for adequately documenting heritage places for the future.
- *Objects in Their Place: An Introduction to Movable Heritage* (NSW Heritage Office, 1999, reprinted 2004), which describes movable heritage and policies for caring for it.
- *Urban Heritage: The Rise and Postwar Development of Australia's Capital City Centres* (Marsden, 2000), a contextual history of post-World War Two central business district development.
- *Australian Historic Themes: A Framework for Use in Heritage Assessment and Management* (Australian Heritage Commission, 2001), which is part of current moves by government heritage agencies to develop common national standards for the identification and conservation of heritage places.
- *Interpreting Heritage Places and Items* (NSW Heritage Office, 2005), which is a guide to interpreting heritage places to the public.

9.4. Making Management Recommendations for Sites

The most important thing to remember about management is that it can extend to a variety of responsibilities. As an archaeologist working in Australia, you have an ethical responsibility to outline clearly how a site that you have identified as significant might be looked after in the short or long term. Obviously you don't have to know everything about the site and what might happen to it in the future, but if you are employed as a consultant, your responsibility is to ensure that your client is aware of their responsibilities and follows an accountable path when dealing with the site. Management can encompass:

- Strategies and methods for protecting sites from interference or damage, both inadvertent and deliberate. For example, you might want to recommend that a site be clearly identified, or fenced off temporarily, to ensure that sub-contractors know where it is located and the location of its boundaries.
- Strategies and methods for repairing sites or parts of sites. If you have identified conservation issues for the site, what is your plan for remedying these?
- Methods for preserving sites. This may simply entail ensuring that they remain as they are over the long term.
- Methods for recording sites prior to demolition or removal. Sometimes, a site that is not significant enough to warrant preservation may still be important enough to document in detail before its destruction takes place. This may be the only record that exists for that site, so this process can be quite detailed and exhaustive.
- Methods for managing visitation to a site. This could include both long-term and short-term management of tourists or other casual visitors, including steps to prevent looters from damaging a site once it has been identified as significant.

Remember that someone has to pay for what you are recommending, so always think carefully about the scale and scope of the project and the likely resources of your employer when drafting your management strategies. When drafting your strategies:

- Remember your report needs to consider indirect and cumulative impacts, as well as direct impacts. One implication of this is that some sites that are outside the direct development area may need to be considered as part of the assessment.
- Clearly separate those recommendations that are mandatory, because they arise out of legal requirements, and those that are simply desirable from an archaeological or management point of view (Haglund, 1984:2.4). Anything that is a legal requirement is obviously binding in a way that other recommendations are not.
- Clarify all the alternatives that you can see and rank these in terms of preference from an archaeological or management point of view (Haglund, 1984:2.4). This allows some flexibility in how the site is managed, depending on resources and circumstances.

- For any recommendations that entail allowing damage to archaeological material, you will need to argue clearly for these recommendations based on your archaeological assessment of the site. In other words it is not sufficient to simply state that the site is “unimportant” or “small” and therefore can be disturbed (Byrne, 1997). You must provide clear and well-argued reasons for allowing any impact on a site or artifact, as well as indicating how this is to be done.
- Clearly separate short-term from long-term management recommendations, so that people can plan how they are to care for a site.

You may also wish to recommend that a site that has been preserved during development is audited (checked) regularly to ensure that your recommendations were sufficient and that they are being sufficiently cared for. If you are contracted to work on a large site, or for a company which employs many sub-contractors to carry out particular tasks (such as a working mine site), it is the developer’s responsibility to ensure that their sub-contractors comply with heritage management recommendations. If this worries you, you could outline a protocol for sub-contractors to follow, or specify in your report that all sub-contractors should be bound by the same recommendations.

If you believe that further work or research is required before a proper assessment of the impacts of the development can be made, clearly state this as a recommendation in your report. So that there is no room for misunderstanding, be as clear as you can about the scope and type of work which is considered acceptable or unacceptable, and any protective measures that you think need to be instituted in the meantime.

You will also need to consider whether the site is part of a suite or complex of sites. This is probably more likely with Indigenous sites, which are commonly thought of as part of a wider network of places which cannot be separated (see Chapter 6), but this might also be applicable to historic sites if there are others of the same age, purpose or with complementary functions in the area. When you are formulating your management recommendations consider the effects that changes made to one site might have for the other sites in the complex.

Finally, remember that you are not just submitting your report to a client, but also to the government authority which administers cultural heritage in that state. The cultural heritage managers (usually, but not always, archaeologists) who work for these authorities are ultimately the people who will assess your report and evaluate it to see how closely it conforms to current best-practice guidelines. They are likely to ask you for clarification on certain aspects of your work, or even ask you to rewrite sections of your report or do more research or fieldwork before they accept it.

9.5. Managing Excavated Material

An archaeologist’s management responsibilities do not cease once an artifact has been collected and a report completed. An object is only as interesting as the

information which explains it, so one of the key ethical principles for conservation is to document fully any processes of recording, collection and analysis you undertake. Particularly when excavating or collecting archaeological material, it is important that it be accompanied by as much supporting material as possible. One of the key ethical issues to be aware of here is that the existence of any such collection immediately calls for suitable storage, conservation and curation once the project is completed, and that these are not considerations which can be left to the last minute.

In Australia, museums and government departments responsible for administering heritage legislation are the two main repositories for excavated archaeological materials. As both are regularly consulted about potential collections, however, and as their storage space is both limited and prioritized, it is by no means certain that either will be willing to accept additional excavated material. How many collections of rusted nails and broken bottle glass does a repository need? This has two repercussions for dealing with artifact collections in Australia:

- You need to think carefully about whether artifact removal and collection is the best management option for a site. This will require consultation with stakeholders and the state heritage authority, as well as a considered significance assessment for the site and its contents.
- If you do think that artifact collection is the best management decision for the site, then you must consult with the relevant state heritage authority early on in the fieldwork process about potential artifact curation and storage, and *not* leave it to the last minute. This will ensure, among other things, that you follow any guidelines that authority might have for documenting and managing a collection to an appropriate standard. It is unlikely that a collection will be accepted without compliance with such guidelines, so make sure you know about them well in advance.

If you find a museum or heritage authority that is willing to accept a collection of professionally excavated and documented archaeological materials, then it is up to you to ensure that the objects are documented, cared for and labelled adequately. Among other things, all artifacts will need to be accompanied by detailed notes on where the material was found, what the site looked like and where the objects were positioned in relation to each other. To ensure that this relationship is not lost, it is essential that the artifacts and their documentation are not separated. This information will add greatly to the interpretive potential of the collection, as will any reports that summarize the findings of the work. Heritage Victoria has an excellent on-line guide for artifact management and conservation, available at: <http://www.heritage.vic.gov.au/page.asp?ID=126>.

If the museum does not have the resources to care for a collection you will need to locate another repository for the material. The best source of advice on appropriate repositories will always be the relevant state heritage authority, particularly as the disposal of collections will usually only be allowed following written permission from this authority.

9.6. Heritage Management, the Community and Cultural Tourism

One of the defining characteristics of archaeology is its cross-disciplinary nature. Archaeologists constantly work with people from a range of disciplines, from the physical sciences to the humanities and social sciences. Beyond this, archaeological fieldwork occurs in real communities and should be sensitive to the interests and agendas of those communities (see, for example, Ah Kit, 1995). This is especially important in longer-term projects, which have the greatest potential to bring sustained benefits to communities. The community benefits of archaeological fieldwork can start with the simple entry of a sizeable archaeological field crew into a small town for an extended stay, providing custom for local businesses. Long-term projects can act as a foundation for reinforcing heritage tourism in the region. Archaeological findings can be incorporated into interpretations of the past in cultural tourism programs, or used as a basis for cultural heritage management plans that can bring increased tourism and a deepened sense of cultural pride in the history of the region.

The management of archaeological sites, and indeed the process of archaeological fieldwork, is closely linked to heritage tourism. Archaeological projects that articulate with local cultural tourism programs have the potential to generate an increase in the quality and quantity of public education, as well as to promote opportunities for economic development, especially if the project is framed in terms of the needs of industry partners (see Chapter 3, funding sources). Moreover, archaeological projects can prompt a community to critically reflect on how its past is presented and to redress any imbalances, such as the absence of an Indigenous perspective, or the omission of voices from working class people, women, or children. In fact, a definitive aspect of community archaeology (as opposed to normal public outreach and education) is that it provokes critical self-reflection by the community, as well as by the archaeologist.

One reason that it is important for archaeologists to work closely with communities is that the day-to-day responsibility for these sites lies with the particular community or custodial group. However, cultural tourism can pose a significant challenge to the management of heritage sites, as visitors can have both positive and negative impacts, and increased visitation means increased responsibility, especially in terms of on-site safety.

Paul Marks' Tips for Managing Onsite Risks

Archaeologists work in and from a diverse range of sites. The keyword in the previous sentence is *work*. A whole lot of obligations arise because archaeological sites are essentially a workplace and therefore regulations and law about Occupational Health and Safety apply. It doesn't matter where in Australia you are working because all Australian States and Territories have very similar laws that regulate workplace safety. When thinking about your responsibilities, it is

important to consider that you *must* look after the health, safety and welfare of “people” in the workplace. “People” includes everyone—all the workers and volunteers at, as well as any visitors to, your site.

What should you do?

1. *Identify risks.* You must identify and assess any risks associated with your site. That means you first need to develop a process that objectively estimates the inherent degree of risk at your site. The assessment should estimate the risk associated with:

- All onsite activities.
- The condition of any plant and equipment, as well as how you use it.
- The general features, condition and layout of the site.

The aim is to identify any risks that are reasonably foreseeable. You should keep records that show exactly how you went about the assessment and identification process because that provides *evidence* of your efforts.

The next step is to work out how any of the risks you identify can be prevented or managed.

2. *Prevent and manage risks.* The type of risks or hazards you identify will depend on the physical features of the site, the type of work you will be doing, the equipment you use, the people who work at or visit the site, and so on.

Any risks that you identify should be, as far as is reasonably practicable, minimised. There are a number of ways you can go about minimising risks:

- Isolate the risk from people. For example, fence off any dangerous site areas you identify and use clear signage to point out hazardous areas.
- Administratively address the risk. For example, implement training programs and develop and adopt safe practices
- Use protective equipment. For example, use helmets, safety glasses or safety boots, if necessary.
- Modify and maintain plant, equipment and work areas. For example, use non-slip surfaces in wet areas and make sure plant is regularly serviced.

3. *Obtain insurance cover.* It is important that you have adequate insurance cover for your activities. The types of insurance you need depend on the nature of the activities you undertake and the features of your site.

In Australia all States and Territories have compulsory schemes, for example WorkCover, that cover injury to workers and usually volunteers too.

If the public visit your site you will need public liability insurance. Think about using an Insurance Broker to advise you about the types of insurance you need.

4. *Be prepared.* Although good risk management practices go some way toward reducing the chance of an accident occurring, you should be prepared. You should:

- Develop an Accident Action Plan that points out who is responsible for managing the response if an accident occurs.
- Designate appropriately qualified first aid people.
- Provide well-stocked first aid kits.
- Develop an induction program for workers and volunteers that includes information about your Accident Action Plan.
- Provide information for site visitors.

5. *Keep accurate records.* Keep records that show how you went about identifying risks and the action you took as a result. If an injury occurs your processes will be examined. Keeping good clear records can help demonstrate that you took the necessary degree of care. The law calls this *due diligence*.

If anyone is injured onsite, you must record full details of the incident and the injury. Also note the names and contact information of witnesses.

6. *Seek advice.* Don't be hesitant about seeking advice. Specific government departments, for example SafeWork in South Australia, are concerned with reducing workplace injury and its effects. As well as playing an inspectorial role, they also provide advice.

Most risk management practices are common sense. You just need to take the time and care to think about safety and risk—and then devise a plan to deal with it. After all, aside from being concerned about the well being of everyone connected to your site, it is your professional reputation at stake.

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The International Cultural Tourism Charter of the International Council on Monuments and Sites (ICOMOS, 1999) provides the following guidelines for relationships with site visitors:

Principle 1. Since domestic and international tourism is among the foremost vehicles for cultural exchange, conservation should provide responsible and well-managed opportunities for members of the host community and visitors to experience and understand that community's heritage and culture at first hand.

Principle 2. The relationship between heritage places and tourism is dynamic and may involve conflicting values. It should be managed in a sustainable way for present and future generations.

Principle 3. Conservation and tourism planning for heritage places should ensure that the Visitor Experience will be worthwhile, satisfying and enjoyable.

Principle 4. Host communities and Indigenous peoples should be involved in planning for conservation and tourism.

Principle 5. Tourism and conservation activities should benefit the host community.

Principle 6. Tourism promotion programs should protect and enhance natural and cultural heritage characteristics.

Lyn Leader-Elliott's Tips for Managing Site Visitors

Here are the main things you have to think carefully about to decide whether or not you want visitors to your site. If you do, then you need to look after both your visitors *and* your site.

1. Do you want visitors or not?

Once you decide to invite or accept visitors, you undertake a range of responsibilities.

YES. Some reasons you might decide you do want people to visit your site are:

- You want to educate a particular group about what you are doing.
- You need to build local community support.
- Your funding requires that you hold open days or accept school groups.

NO. You may decide you don't want visitors for a variety of reasons:

- Cultural or ethical issues (e.g. with Indigenous sites and burial sites).
- The site is vulnerable to damage and theft.
- There are not enough of you to be able to look after visitors properly.
- None of your team has the personal skills required to make the visitors' experience positive and enjoyable—not a pleasant thing to come to terms with, but one you have to think about.

2. If you want visitors, think about who will be interested in coming, and who you want to come (not always the same thing)

- In marketing language this is called identifying your target markets.
- It is essential to know who your markets are likely to be, so that you can then think about how you're going to reach them. For instance, do you want school groups, international specialists in your area of research, or passing travellers?
- Each one will be reached in different ways. They will have different information needs and they will use the site in different ways.
- Publicity, advertising and other marketing activities will only work if you are targeting the right people through media that they use.

3. Publicity

If you want visitors, you need to publicise what you're doing.

Some of the ways you can do this are:

- Local media—newspaper, radio and television.
- Local groups. Most local governments publish lists of community organizations. You can arrange to speak to their members, hold a public meeting to discuss your project, send out information through their newsletters and so on.

- Schools—primary and secondary.
- Brochures/leaflets/posters for distribution through local community and tourism outlets.
- A large, continuing project has wider opportunities to use media and tourism outlets. Talk to your regional tourism marketing manager and cultural development officer.
- Create a website and maintain it.

If you don't want visitors, don't publicize your project (and go back to Question 1).

4. Visitor management

Some key questions for you to consider are:

- Can visitors come at any time, or do you want them to come at set times? These require different marketing and management strategies.
- Can they wander anywhere unsupervised? If not, what will you do to direct them away from some areas and towards others? Paths, barriers, signs and guides are all ways of managing people on your site.
- Are you going to charge admission to your site or for guided tours? How are you going to manage the money?
- How will you manage rubbish?
- Will you sell or supply water or other refreshments?

5. Risk management

You need to identify potential risks to the site, to visitors and to your workforce (paid and volunteer). Once you know what the risks are, you need to plan to minimize the likelihood of them happening.

- What sorts of insurance do you have?
- Do you need public liability insurance?
- Are dangerous areas fenced?
- Do you have adequate signage?
- Will visitors to your site be able to experience what your marketing and publicity materials promise?
- What will you do if someone hurts themselves?

Paul Marks' tips on risk management will give you more information on how to identify and manage risks.

6. Interpretation

When visitors come to your site, they want to understand what you're doing, and what the site means. Communicating this meaning in ways that engage your visitors is called interpretation. Good interpretation needs:

- Considered choice of ideas you want to convey.
- Identifying the best ways to convey them (e.g. through story telling, guided tours, brochures, on-site signs, interpretation centers, and so on).
- Interpreters who know what they are talking about and who can communicate well with visitors—groups as well as individuals.

7. Make your visitors welcome

Whether or not your visitors are paying to enter your site, you should think of them as customers, and you need to make sure they get good service. Some examples are:

- When people arrive, make sure that someone welcomes them.
- If they have a booking, hand over to the person who will look after them.
- If it's a group, you need enough people on hand to manage people's safe movement around the site, act as interpreters and answer questions.
- Answer all questions politely and willingly, even if you've heard them hundreds of times before, or you think they are silly, e.g.
 - Have you found any treasure/gold/a dinosaur?
 - Have you been to Egypt?
 - Where are the toilets? (especially when there aren't any).

If you and your team don't think you can manage this, go back to Question 1.

8. Dealing with difficult people

This is often one of the hardest things to manage well, especially when you are interrupted unexpectedly, or if you have to deal with someone who is angry or rude. Here are some basic tips:

- You are representing every team member involved in the dig, and the way you interact with people will affect the way the whole team is regarded.
- Count to 10 before you bite back. Let your rational brain kick in and over-rule your emotional response.
- Aim for a problem-solving response to complaints.
- If you cannot guarantee that you can always be agreeable and welcoming or respond positively to complaints, you have three options:
 - (a) Take a training program to help build your people skills.
 - (b) Make sure you are not one of the team members who has any dealings with the public.
 - (c) Go back to question 1 and review your answer.

9. Make sure your workforce knows what to do and say

Once you have decided to have visitors on site, anyone who is likely to have contact with them will need to know:

- Your safety program and how to deal with emergencies.
- Where to take visitors on tours—which areas are off limits and which are publicly accessible (you may have cultural or physical restrictions on all or some of the site).
- Your policy on children (should always be accompanied) and pets (undesirable).
- How to meet, greet, conduct a tour and deal with difficult customers.
- Enough background information to answer a wide range of questions about the project and related issues.
- When permissions need to be asked.
- The right person to contact on any area of operations or information they don't know themselves.

To achieve this, you need an induction or training program, so that team members know how to work successfully with visitors, and where to go for extra information. If this all seems too hard, go back to Question 1. Thinking through your objectives must always be the starting point for all your decision making.

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One important way in which archaeologists engage with communities is through the media. Every now and then journalists will approach you for interviews, especially if your research area happens to be in an area that is considered “hot”. This is a good thing, as being visible is an important part of an academic career: not only do we have to be experts in our various fields—but we have to be acknowledged as such. It is also one of the key ways to reach the general public and inform people about archaeology. So, if the occasion arises, our advice is to engage with the media. Your contributions will inform the community about archaeology as a discipline, your project in particular, and may produce some interesting or useful feedback, including visitors and volunteers.

Working with the Media

The media rarely publishes a story exactly the way you would choose to have it portrayed, so you need to do your best to make certain that the views attributed to you actually reflect what you think.

- Identify in advance the main points you wish to come out in the coverage and speak to these points regularly throughout the interview. You will have to adjust this to the medium: the live television interview is usually about four minutes and a phone interview with a print reporter usually takes about thirty minutes. Learn how to do this by analyzing interviews with politicians.
- While journalists may have contacted you because they are looking for information or facts, their primary aim is to get material which captures the interest of their audience. If you express your views in compelling language you are more likely to be quoted. Think like a journalist: before the interview identify the assertive language and descriptions that will make your interview into “good copy”.
- Phone interviews present particular challenges. Firstly, in a phone interview your role is reactive, rather than proactive, since you don’t know that a story is being researched until you have been approached. Therefore, you may not be fully prepared. Secondly, you may be misrepresented or misquoted, albeit often inadvertently, or you may give an impolitic comment off the cuff. One way to deal with this is to ask the journalist to call you back at an agreed hour, so that you have time to think the main issues through.

- The value of television and radio interviews is that words cannot be put into your mouth. However, editing is necessarily selective, so be careful of making caustic comments that may turn out to be good “sound bites” but which can be easily separated from the main ideas you wish to get across in the interview.
- If you are doing a television studio interview, don’t try to find and speak to whichever camera is turned on. Just talk to the interviewer. If you try to play to the camera you could lose concentration and get flustered, or may end up looking off into space as far as the viewers are concerned.
- In live interviews, be careful about the length of your answers. If your answer is too short, you can seem abrupt; and if it is too long, you may lose the attention of your audience (many of whom are *not* listening, so they can become bored).
- One way of getting your opinion out is to offer an opinion piece to the editor of a local or national newspaper. The opportunity for this arises if something controversial happens in your field or new and important data comes to light. The key word here is “topical” (rather than important *per se*). In these circumstances, you could offer to give an opinion piece, analyzing the new information and its wider implications. There are several benefits in providing an opinion piece. Unlike other forms of engaging with the media your opinions will only receive light, or no, editing. Also, sometimes you get paid. For example, the Australian newspaper pays several hundred dollars for an opinion piece of around 800 words.

9.7. Indigenous Heritage and Conservation Issues

A contemporary issue in Australian archaeology concerns the most appropriate ways to manage Indigenous cultural heritage. The worldviews and values of European and Indigenous peoples are different in many respects (see Chapter 2), and this can create a potential for conflict in cultural heritage management, especially in relation to conservation practices.

9.7.1. *The Indigenous Notion of a Living Heritage*

Indigenous Australians inherit a living heritage. The landscapes they inhabit are full of meaning, redolent with power and potentially dangerous. There are many places in the landscape that can only be accessed by people with particular rights or knowledge, and it can be dangerous for other people to visit those sites. Many of these places of significance cannot be identified by traditional archaeological methods, and knowledge concerning them is held in the hands of appropriate people. In this way, the living heritage of the land is linked to the living heritage of oral traditions, rituals, and Indigenous knowledge systems. While elements of these traditions have been subjected to transformation as part of colonialism, others are directly linked to the ancestors of contemporary Indigenous peoples.

For Indigenous peoples, cultural heritage is a living and evolving tradition, its continuity vital to their identity and cultural survival (Janke, 1999:7). As a living tradition, Indigenous cultural heritage is closely tied to oral histories and the process of re-creating those traditions:

For a living culture based on spirit of place, the major part of maintaining culture and therefore caring for place is the continuation of the oral tradition that tells a story. The process of re-creation, rather than reproduction is essential to the reality of Indigenous people. To them, reproduction is unreal, while re-creation is real. The [European] fixation on the written word has implications for the practice of cultural heritage (Department of Aboriginal Affairs, NSW, cited in Janke, 1999:8).

The notion of a living heritage is grounded in the inter-relationships between ancestral beings, ancient and present peoples, and the manner in which the Dreaming era informs the present. This culminates in an understanding of the natural world as dynamic, responsive, and alive. Not only was the land created by ancestral beings, but they still inhabit specific places, sometimes several places simultaneously. For many Aboriginal people, both ancestral beings and human ancestors have life in the present, and the ability to impact upon people's lives on a daily basis. Thus, the places associated with ancestral beings continue to be imbued with their potency, forming an important part of the living heritage of Indigenous Australians.

The notion of the land as part of a living heritage has implications in terms of people's ability to traverse the landscape (or "survey", in archaeological terms). In the Barunga region of the Northern Territory, for example, non-Aboriginal people are only allowed to visit fishing places or family sites which are visited regularly by community people. Non-Aboriginal people are not allowed to go bushwalking by themselves and cannot undertake surveying without supervision by a traditional custodian. The difficulty is that there are secret sites that cannot be visited haphazardly, some of which should not be visited by women or children at any time. There are some sites that even the senior traditional owner, Phyllis Wijnjorroc, cannot visit, and others that can only be visited by two people together, one from each moiety. When Barunga people visit sites they have not been to for some time, they call out in Aboriginal language to the old people whose spirits still live at these places, including people who have died in the recent past. Phyllis Wijnjorroc says: "Those people are listening now. They're not deaf". Aboriginal people tell the spirits that they are visiting and that they don't wish to disturb them. They introduce any new people who are visiting those places and, if they wish to do anything particular or special when they are there, such as retouch rock paintings, they ask permission from the spirit people. In regards to non-Aboriginal people undertaking survey work or walking in this country, the concern is that these people might stumble across a place they have no right to visit, and unwittingly cause damage and disturb potentially malevolent spirits just by visiting the place, irrespective of whether they touch anything or damage the site in any way. For Barunga people, these spirits, once disturbed, are quite likely to cause serious trouble within the community as punishment for being disturbed, and may also be dangerous to the intruder. In these circumstances, both sites and community

TABLE 9.1. Comparison of European and Indigenous notions of heritage and conservation.

European notions of heritage	Indigenous notions of heritage
The concept of an inert landscape.	The concept of a living landscape.
The segmenting of past, present and future.	The inter-relationships of past, present and future.
The fixedness of written traditions.	The fluidity and flexibility of oral traditions.
An emphasis on bounded sites and locales.	An emphasis on inter-connections between sites and locales.
Forms of knowledge are compartmentalized.	Forms of knowledge are inter-related.
The validation of knowledge comes from formal qualifications (e.g. degree, diploma).	The validation of knowledge comes from Elders.
The notion of relatively open access to knowledge.	The notion of partitioned access to knowledge.
The notion of world heritage.	The notion of local custodianship.
Knowledge is bought or acquired through independent study.	Knowledge is earned through appropriate cultural behavior.
The importance of preserving original authenticity.	The power inherent in original authenticity imbues contemporary use.
Material evidence of a site visit, especially rubbish, should be taken away, to keep the site looking unused and pristine.	Material evidence of a site visit, sometimes in the form of rubbish, should be left at the site to show it has been visited and cared for recently.
Rock paintings should look old, untampered with.	Rock paintings should look "bright", cared for.

harmony are "conserved" through being protected by unauthorized visits from strangers.

This Indigenous notion of a living heritage is very different to the European notion of a pristine or unchanging heritage, and this has implications in terms of heritage management philosophies. The European heritage management philosophy of conserving the past and maintaining original authenticity is based on a notion of linear time. On the other hand, the Indigenous notion of time, in which the past continues to exist in the present (see Figure 2.11), underwrites a cultural heritage management philosophy in which the past is kept strong (and somehow alive) through appropriate and recurrent use of the land in the present. Some of the major differences between European and Indigenous notions of heritage and conservation are outlined in Table 9.1.

9.7.2. *Conservation or Desecration? The Repainting Debate*

Keeping the past strong in the present often requires tangible expression. In some communities in northern and western Australia, the appropriate conservation of sites includes their active use in the present, through, for example, the repainting of rock paintings. Some of the complexities inherent in different notions of heritage conservation can be seen in the debate over the 1987 repainting of Wandjina sites in the Gibb River region of the Kimberley, Western Australia. In this venture,

funded under the Community Employment Project, young Aboriginal people repainted several major rock art galleries under the supervision of senior custodians (Mowaljarlai et al., 1988). However, the repainting caused an outcry when the media picked up criticisms by non-Aboriginal people (e.g. Walsh, 1992), on the grounds that young people would not have undertaken repainting in a “traditional” context, and that the artistic standard of the painted images was low. However, a number of archaeologists (e.g. Bowdler, 1988; Vinnicombe, 1992; Ward, 1992), argued for Indigenous rights to care for their cultural heritage in their own terms.

The repainting debate highlights fundamental disjunctions between European and Indigenous notions of caring for heritage, and some of the cultural values that underlie these. Mowaljarli and Peck’s (1987) description of the motivations behind this program draws upon the notion of a living heritage:

At a big meeting we decided that we would only re-paint sites that were faded and needed re-painting. Photographs were taken at each site before any re-painting took place. We talked to the custodians of the sites and they agreed that the re-painting should be done. An elder was present at each site when it was re-painted and told the stories about the place and showed the young people how to re-paint the sites Our language and our art must be shared and given to the next generation—this is how it has always been. It is not just nice to re-paint the site, it’s got to be done. You see Wandjinas have power and we must look after them so the power is used properly (Mowaljarli & Peck, 1987:71, 72).

Differences between Indigenous and European notions of what constitutes “conservation” underwrite this debate (see Table 9.1). Indigenous and non-Indigenous people access the past through rock art in different ways and this influences their views of what is aesthetically pleasing, and whether rock paintings should or should not be renewed. For Aboriginal people, such as those in the Kimberley and Barunga regions, the renewal of rock paintings shows a proper respect for the past and for ancestors, both recent and distant. Sometimes, Barunga people comment on how poor paintings look because they are worn away and faded, or become sad that paintings are not being renewed. A “bright” painting shows that the past is being respected properly (see Sales, 1992). The paintings are being cared for, the rules are being followed, and the old people are not forgotten.

In contrast, for non-Aboriginal people it is important that relics from the past look old. They search for the patina that comes with age, and the brightness of repainting is antithetical to a European notion of conserving the past. Non-Aboriginal people inherit a museum approach to preserving the past: their traditions focus on the preservation of art works in their original condition, as treasured objects from a distant past which need conservation, rather than renewal. The painting should remain the unaltered work of the original artist (although this is not always the case, of course): the notion of a contemporary artist repainting the work of a past master artist would be abhorrent to a European sensibility.

The debate over repainting is merely one example of how Indigenous attitudes to cultural heritage and its purpose in the present may vary quite widely from Europeans’. When you make management recommendations for sites, bear this distinction in mind—what might seem on the surface “bad” management practice

when judged by European values, may be an essential part of Indigenous world-views and should be respected.

9.7.3. *Indigenous Land Use Agreements*

New ways of managing ancestral lands and waters are emerging from a collaboration of Indigenous and archaeological approaches. These new approaches have begun to incorporate Indigenous ways of constructing knowledge into the strategies and practices governing the management of land and seascapes. One of these strategies is the Australia-wide development of Indigenous Land Use Agreements (ILUAs), which set out a framework for voluntary co-operation between different interest groups in regards to the access, use and development of land. A direct response to the post-Mabo regulatory landscape, ILUAs are a mechanism for Indigenous empowerment through establishing regional alliances with pastoralists (ranchers in northern hemisphere parlance), mining and conservation interests. The *Native Title Act 1993* allows for local and state government and industry to negotiate land use agreements at a local or regional level with native title holders. Although the successful use of these agreements requires negotiations based on good faith, once registered they allow for the consideration of Indigenous culture and experience when making decisions about future land management issues.

One of the first such agreements was negotiated in Cape York Peninsula, the northern tip of Queensland. Stemming from a comprehensive study into existing land use and management of the region, and the compilation of a comprehensive inventory of its natural, cultural, development and infrastructure assets, various stakeholder groups (including the conservation, Indigenous, commercial herding, mining, local government and tourism sectors) signed an historic pact intended to establish a consensual approach to land management issues in Cape York. Despite the agreement lacking any enforceable provisions and neither the Queensland nor Federal governments being party to it, the Cape York ILUA established a set of guidelines for the future use and management of Cape York, including continuing rights of access for traditional owners to pastoral properties for traditional purposes and a commitment to developing sustainable management regimes. Once registered, however, an ILUA is legally binding on the people who are party to the agreement and all native title holders for that area. The success of such land use agreements for industry partners is apparent in the response by Jim Petrich, Chief Executive Officer of the Cape York Peninsula Development Association:

What we started in Cape York can be used as a template around regional and rural Australia. Indeed, it can be used in urban Australia to give people some power back on the ground to make decisions—and it is win/win across the board (Petrich, 2001).

References and Further Reading

- Ah Kit, J. (1995). Aboriginal aspirations for heritage conservation, *Historic Environment*, 11(2 & 3), 31–36.

- Australian Heritage Commission (2001). *Australian historic themes: A framework for use in heritage assessment and management*. Canberra: Australian Heritage Commission.
- Australian Heritage Commission (2002). *Tracking the dragon: A guide for finding and assessing Chinese Australian heritage places*. Canberra: Australian Heritage Commission.
- Bickford, A. & Sullivan, S. (1977). Assessing the research significance of historic sites. In S. Sullivan and S. Bowdler (Eds.), *Site surveys and significance assessment in Australian archaeology* (pp. 19–26). Canberra: Department of Prehistory, Research School of Pacific Studies, Australian National University.
- Bowdler, S. (1988). Repainting Australian rock art. *Antiquity*, 62, 517–523.
- Byrne, D. (Ed.) (1997). *Standards manual for archaeological practice in Aboriginal heritage management*. Sydney: NSW NPWS.
- Byrne, D., Brayshaw, H., & Ireland, T. (2001). *Social significance: A discussion paper*. Sydney: New South Wales National Parks and Wildlife Service.
- Johnston, C. (1994). *What is social value? A discussion paper*. Canberra: Australian Government Publishing Service.
- Haglund, L. (1984). *Checklist and requirements for consultant's reports*. Sydney: Australian Association of Consulting Archaeologists Inc.
- Heritage Council of Victoria (1998). *Understanding the Burra Charter*. Melbourne: Heritage Council of Victoria.
- International Council on Monuments and Sites (ICOMOS) (1999). *Cultural tourism charter*. <http://www.icomos.org/tourism/charter.html>.
- Janke, T. (1999). Our culture. Our future. *Proposals for the recognition of Indigenous cultural and intellectual property*. Canberra: Australian Institute of Aboriginal Studies and the Aboriginal and Torres Strait Islander Commission.
- Kerr, J. S. (1985). *The conservation plan: A guide to the preparation of conservation plans for places of European cultural significance*. Sydney: The National Trust of Australia, New South Wales.
- Kevin, C. & Pesman, R. (2001). *A history of Italian settlement in NSW*. Sydney: NSW Heritage Office.
- Marquis-Kyle, P. & Walker, M. (2004). *The illustrated Burra Charter*. Sydney: Australia ICOMOS.
- Mathews, I. (1991). *How to use the media in Australia*. Sydney: Collins/Fontana.
- Mowaljarlai, D. & Peck, C. (1987). Ngarinyin cultural continuity: A project to teach the young people the culture including the re-painting of Wandjina rock art sites. *Australian Aboriginal Studies*, 2, 71–78.
- Mowaljarlai, D., Vinnicombe, P., Ward, G.K., & Chippindale, C. (1988). Repainting images on rock in Australia and the maintenance of Aboriginal culture. *Antiquity*, 62, 690–696.
- NSW Heritage Office (2000). *Assessing heritage significance*. Sydney: NSW Heritage Office.
- Paraskevopoulos, J. (1994). Deliberations of the working groups—summary. In J. Ramsey & J. Paraskevopoulos (Eds.), *More than meets the eye: Identifying and assessing aesthetic value* (pp. 79–84). Canberra: Australian Heritage Commission.
- Pearson, M. (1984). Assessing the significance of historical archaeological resources. In S. Sullivan & S. Bowdler (Eds.), *Site surveys and significance assessment in Australian archaeology* (pp. 27–33). Canberra: Department of Prehistory, Research School of Pacific Studies, Australian National University.
- Pearson, M. & Sullivan, S. (1999). *Looking after heritage places. The basics of heritage planning for managers, landowners and administrators*. Melbourne: Melbourne University Press.

- Pearson, M. & McGowan, B. (2000). *Mining heritage places assessment manual*. Canberra: Australian Council of National Trusts and Australian Heritage Commission.
- Pennay, B. (1998). *Placing Federation. A checklist for local studies of federation and surveys of federation places in New South Wales*. Sydney: NSW Heritage Office.
- Petrich, J. (2001). Cape York Partnership Plan: the Foundations. *The Brisbane Institute Web Site* online: http://www.brisinst.org.au/papers/petrich_foundations.html.
- Ramsey, J. & Paraskevopoulos, J. (1994). *More than meets the eye: Identifying and assessing aesthetic value*. Canberra: Australian Heritage Commission.
- Sales, K. (1992). 'Make 'em bright'—Aboriginal re-marking of rock art in past and present Australia (Honours dissertation, Sydney University, 1992).
- Schiffer, M. & Gummerman, G. (1977). *Conservation archaeology*. New York: Academic Press.
- Turnbull, C. & Valiotis, C. (2001). *Beyond the rolling wave: A thematic history of Greek settlement in NSW*. Sydney: NSW Heritage Office.
- Velthuis, K. (2005). *The Dutch in NSW: A thematic history*. Albury: Charles Sturt University.
- Vinnicombe, P. (1992). Kimberley ideology and the maintenance of sites. In G.K. Ward (Ed.), *Retouch, maintenance and conservation of rock art imagery* (pp. 10–11). Melbourne: Australian Rock Art Research Association.
- Walsh, G. (1992). Rock art retouch: Can a claim of Aboriginal descent establish curation rights over humanity's cultural heritage? In M. Morwood & D. Hobbs (Eds.), *Rock art and ethnography* (pp. 46–59). Melbourne: Australian Rock Art Research Association.
- Ward, G. (1992). Ochre and acrylic: Conflicting ideologies and divergent discourses in the issue of repainting of Aboriginal imagery. In G.K. Ward (Ed.), *Retouch, maintenance and conservation of rock art imagery* (pp. 31–38). Melbourne: Australian Rock Art Research Association.
- Williams, M. (1999). *Chinese settlement in NSW: A thematic history*. Sydney: NSW Heritage Office.

Key Guides and Resources

- Australian Heritage Commission and the Department of Industry, Science and Resources (2001). *Successful tourism at heritage places. A guide for tourism operators, heritage managers and communities*. Canberra: Australian Heritage Commission and the Department of Industry, Science and Resources.
- Australian Heritage Commission's HERA Database: (<http://www.ahc.gov.au>) bibliographic database of published material and unpublished reports and articles on heritage subjects, with about 30 000 entries. You can search by key word, location, author and title. The AHC Library can provide inter-library loan access to the large number of books and reports that are listed in HERA.
- Department of Environment and Heritage: <http://www.heritage.gov.au/protecting.html> *Protecting local heritage places: A guide for communities*, and *Protecting heritage places: Information and resources kit*. The kit includes a website, CD-ROM, workbook folder, user guide and presenters' notes. Available online.
- Heritage Victoria (2004). *Archaeological artefacts management guidelines*. Melbourne: Heritage Victoria. Available on-line at <http://www.heritage.vic.gov.au/page.asp?ID=126>.
- International Council on Monuments and Sites (ICOMOS) *Cultural Tourism Charter*: <http://www.icomos.org/tourism/charter.html>. This Charter on managing tourism at places of heritage significance contains useful ethical principles for: guiding host community

and visitor experience at sites; the sustainable management of the relationship between heritage places and tourism; the enhancement of visitor experience through conservation and tourism planning; the involvement of host communities and Indigenous peoples in heritage and tourism planning; the planning of measures to benefit host communities; and the protection and enhancement of natural and cultural heritage characteristics.

NSW Heritage Office: <http://www.heritage.nsw.gov.au>. the website of the NSW Heritage Office, has a wide range of on-line guides to assessing and managing places of cultural significance, including the *NSW Heritage Manual*, guides to the photography of heritage places, historical research, and preparing thematic histories. Even though its content is intended specifically for NSW it contains many useful general principles.

Department of Environment and Conservation (formerly the National Parks and Wildlife Service) library: <http://www.nationalparks.nsw.gov.au/npws.nsf/Content/Our+research+library>. The DEC library has a wide range of reference materials relevant to cultural heritage work around the state. It is open to the public and you can search the catalog online or visit the library when you are in Sydney.

DEC also offers a range of high quality, free publications at <http://www.nationalparks.nsw.gov.au/npws.nsf/Content/Publications>. This site offers downloads of conservation plans, management plans, policy works on recording Indigenous heritage sites, and various cultural heritage works (those published by the DEC/NSW NPWS are free) dealing with the recognition and assessment of Indigenous cultural heritage, contact sites, historical archaeology, oral histories and related issues.

10

Documentation and Publication

This chapter outlines standard procedures for publishing in a range of archaeological venues. Publication is the act of communicating information to the public. Making your work available to others who have an interest in it—i.e. publishing in some form the results of your fieldwork, analysis, and assessment—is an important ethical responsibility. You should write up and publish the results of your research as quickly as practicable, with the aim of informing as wide an audience as possible. The major publication venues for archaeologists are:

- Technical (or consultancy) reports.
- Community reports.
- Academic books and journals.

While publishing your results is an ethical obligation, it also gives you the pleasure of sharing your knowledge and experiences, and voicing your opinion. In addition, the act of writing for publication prompts you to think through the results of your research more deeply than you might otherwise.

10.1. Technical Reports

The Australian standards for organizing and presenting the results of archaeological fieldwork in a written report have been developed by AACAI and the various state heritage bodies which publish standards for archaeological fieldwork and reporting. The most important standard to bear in mind when writing a technical report is to make your data and results comparable with those of others. This means that you need to be absolutely clear about what methods you used, the limitations you faced, the definitions you used, and the data you collected and analysed. Precise descriptions of the extent of survey areas and the amount of coverage the survey achieved are essential (and, indeed, are mandatory in some states) and wherever possible should be supplemented with clear diagrams showing the size and location of your transects, survey areas or sampling zones.

Each state has its own systems and standards, and it is important that you familiarize yourself with the documents that apply to your particular situation. These are

the standards to which your report will be held and may well lead to it either being accepted or rejected. To get a handle on Australian standards for technical reports you should consult some of the state government publications that are available online. Since procedures and guidelines are continuously evolving, it makes sense to use internet versions rather than printed copies, especially if these were printed some time ago. In New South Wales, for example, the Cultural Heritage Branch of the Department of the Environment and Conservation publishes an *Aboriginal Cultural Heritage: Standards and Guidelines Kit* (Byrne, 1997) (available on-line at <http://www.nationalparks.nsw.gov.au/npws.nsf/Content/Publications>), which outlines precisely what information consultancy reports in Indigenous archaeology in NSW should contain, and how this information should be presented, as well as standards for archaeological practice in Aboriginal heritage management. In Victoria, a variety of useful documents can be downloaded from <http://www1.dvc.vic.gov.au/aav/heritage/forms>. These include the Aboriginal Affairs Victoria (AAV) publication, *Guidelines for Conducting and Reporting Archaeological Surveys in Victoria*, and a range of important forms, including a site inspection form, preliminary report form and excavation permit application form. The AAV also has guidelines for filling out their site cards and other essential reporting forms. The Department of Indigenous Affairs in Western Australia also has a *Heritage Manual* that can be downloaded from <http://www.dia.wa.gov.au/Heritage/HeritageManual/default.aspx>, as well as a range of applications and report forms. Similarly, the Heritage Unit in the ACT is currently developing a set of heritage guidelines and a manual for Aboriginal heritage which will be made available online from their website. While all of the above documents will give you a sense of standards for archaeological reporting in Australia, it is important to remember that there can be significant variation between states, so if you are writing a report you will need to be certain that it fulfils the criteria for the particular state in which the work has been undertaken.

10.1.1. Formatting

A technical report must have at least six main sections, although each of these can be split up in various ways if required:

- Abstract/Executive Summary.
- Aims/research questions.
- Methods.
- Results.
- Discussion.
- Recommendations.

The *aims* section tells the reader what was done and why, what the report will cover and how the research articulates with other projects, or fits into current theoretical debate. If you have research questions arising from a previous research design, then you can also outline them here. Definitions and assumptions can be outlined in this section, although they can also be placed in a glossary. This section may

include your literature review, highlighting the significance of your project in terms of previous research.

The *methods* section describes exactly how and where the project was undertaken, and precisely how the data was collected and analyzed. A clear and precise description of your methods is one of the most essential parts of any report. This is what allows others—either other researchers who may want to expand or re-analyze your data, or, more importantly, assessors within the government body that administers the cultural heritage legislation—to decide whether your methods were adequate to answer your research questions, and whether they need to gather any further information before they can make a decision. In theory, this section should provide enough detail so that a reader could replicate your research if they wished to.

The *results* section outlines what was found. This is a statement of findings or observations, presented with very directed discussion. You need to present your results in a logical progression. Graphs and tables are an excellent way of communicating your results, as they present your findings in an easily understood visual format and in part allow the reader to make their own interpretations. If you use percentage graphs, make sure that you always include the raw data, so that the reader can assess whether the numbers you present are likely to be statistically significant. Normally, small numbers (e.g. less than ten) are considered to be insufficient to be statistically significant (although they may still represent a genuine phenomenon).

Interpretation of the significance of the results to the wider world is presented in the *discussion* section of the report. It is important to tie your interpretations closely to the aims or research questions that were originally posed at the beginning of your study. This is your opportunity to answer those questions. If the results are inconclusive, then say so, and provide some possible explanations as to why. *Recommendations* for management or conservation (if this was the point of the project) or for further research are included in your recommendations section.

Technical reports also require an *abstract* or *executive summary* at the beginning that allows the reader to determine the results and recommendations of your report quickly and succinctly. This should contain a brief overview of the major sections (aims and significance, methods, results, discussion, recommendations) but should also be as short as possible. Ideally, it should be one page or less. An executive summary is a device for site managers who do not wish to wade through your entire report to assess your findings. It allows you to be absolutely clear to your client about what their responsibilities are, and about what the proper management of the site requires.

Before you submit your report, get feedback on it, particularly if you are working with other groups of people with a vested interest in the site. Feedback may mean submitting a draft report to the client and to any other interested parties, and waiting for responses before you submit the final version. This gives all stakeholders an opportunity to comment. This is particularly important if you are working with

Indigenous communities, as they are likely to have definite and often quite specific ideas about what they think are adequate management strategies (which, if you've consulted properly, you should be well aware of). Before you submit your report, take your recommendations back to the community, and carefully go through them together to make sure that everyone understands what is at stake and has an opportunity to comment on whether they think the recommendations are suitable or unsuitable.

Finally, remember that you are not submitting your report to a client, but also to a government authority. The people who work for these authorities will assess your report according to current best-practice guidelines. You must also satisfy your client, of course, because they are the ones paying for you to do an adequate job in the first place. A client is unlikely to be sympathetic if they have to pay more money because you did a substandard assessment that later requires substantial reworking before the state government authority will accept it.

Copies of technical reports need to be lodged with major and local public libraries as well as government departments. You should also give copies to Indigenous community groups, volunteer organizations and any local societies who were involved with the project. Reporting back to Indigenous community groups is routinely done in the form of a plain English community report (see "Community Reports" below), rather than a detailed technical report. Plain English reports are not yet common in historical or maritime archaeology in Australia, but are likely to become more so in the future. A detailed checklist for what to include in a technical or consultancy report, beyond the summary sections we have provided here, is included below.

10.1.2. How Accountable is Your Report?

Before you submit your report, check how closely it conforms to these best practice expectations:

- Have you used standard measures and terminology to describe sites and artifacts?
- Have you defined all your terms and categories, either in the body of the report or in a glossary?
- Have you been explicit about how you chose to define a site, and the way that you decided on the site's boundaries?
- Have you outlined the logic of your sampling strategy?
- Have you shown clearly on a map where your sampling units/transect/excavation squares were located?
- Have you shown clearly on a map the location of all of your sites (unless requested to keep details of sites secret)?
- Have you been explicit about your methods during all phases of the project?
- If you have used a new method, have you been explicit about how you went about it and what its limitations were?

- Have you been explicit about the limitations you encountered during all phases of the project?
- Have you evaluated the effectiveness of your survey coverage?
- Have you evaluated the usefulness of your historical or ethnographic sources?
- Have you provided grid references for all of your sites (unless requested to keep details of sites secret)?
- Have you made your data accessible to reinterpretation (e.g. included all supporting material relevant to your data analysis as an Appendix, such as your tables of raw data, your database and/or your recording forms)?
- Have you included details of all consultation undertaken with any parties or individuals as part of the project?
- If you obtained a permit to survey or excavate, have you included details of the permit number in the report?

Checklist for Consultancy Reports

The following is a checklist of the standard accepted categories for a generic consultancy report. This is only one suggested format for a standard consultancy report and not all categories will apply in every circumstance.

Title page

- Title of report.
- Client or group for whom it is prepared.
- Date.
- Author's name and address.

Acknowledgments

Summary

- Overview of project.
- Overview of results.
- Overview of significance.
- Overview of recommendations.
- Any restrictions on the use of the report or on the information contained within the report.

(Table of) Contents

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Introduction

- Brief description of project.
- Where the project is located (e.g. brief statement of nearest town, or important geographical feature, state or area of state, borders of study area, etc.) and why the project was commissioned/carried out.

- Who commissioned/funded the project.
- Aims and scope of the study. Include any formal brief or informal instructions issued as part of the project.
- Types of investigation conducted (e.g. field survey, Aboriginal consultation, excavation, document searches, oral histories).
- When fieldwork, analysis and report writing took place.
- Who undertook fieldwork, analysis and report writing.
- Any constraints or limitations that were imposed on the project (e.g. bad weather, limited time, attitudes of landowners, particular instructions which limited the survey in any way, such as instructions from Traditional Owners to stay away from areas).
- Any constraints or limitations of the data (including documentary sources) collected during the project (e.g. lack of suitable oral history informants, loss of data, inability to find certain information).

Background information

- General description of study area (e.g. size, present land use, access etc).
- General description of environment (e.g. geology/geomorphology, topography, water courses, flora and fauna, relevant raw material sources, etc).
- Previous impacts on the study area (e.g. past logging, clearing, ploughing, mining, erosion, etc).
- Description of proposed development and associated works, including what activities could be expected to have an impact on the archaeology.

Previous research

- Relevant ethnographic studies and findings within the region and the study area.
- Relevant historical studies and findings within the region and the study area.
- Relevant archaeological studies and findings within the region and the study area.
- Relevant oral histories and findings within the region and the study area.

Methods

- Research strategy and aims.
- Detailed description of fieldwork methods for all stages of fieldwork. Outline clearly the equipment and techniques used to implement the research strategy (e.g. choice and location of sample areas, recording methods, collection methods, storage of artifacts/information, methods of analysis).
- Discussion of any problems which arose during fieldwork, analysis or report writing.
- Detail of the constraints on archaeological visibility during the survey.
- Description of any decisions made in the field or the laboratory that changed the scope of the study.
- Details of people involved.

Results

- Summary of what was found or achieved (e.g. quantities, types, distribution).
- Description of findings based on field notes and recording forms.
- Relevant tabulations of data, photographs, illustrations.

Discussion

- Summary of points of interest or major research problems emerging from the study.
- Discussion of the evidence in regional and local perspective.
- Implications of the findings and areas for future research.

Assessment of significance

- General statements of significance for the study area.
- Specific statements of significance for individual sites/areas (including whether further research is necessary to adequately determine significance).

Statement of impacts

- Implications of the probable effects of development on the study area and the findings (including direct, indirect and cumulative impacts). This may mean also considering sites *outside* the direct development area if those sites are likely to be impacted.

Recommendations

- General management recommendations, including alternatives where possible (e.g. dealing with the study area in general or with particular zones or areas within it).
- Specific management recommendations, including alternatives where possible (e.g. dealing with individual sites or artifacts).
- Discussion of any issues or problems attached to these recommendations (e.g. client's preferences, difficulties, attitudes, compromises, etc).
- Identification of any legal requirements or processes that must be followed.

*References**Appendices*

- Relevant additional information, including information which needs to be kept restricted.
- A glossary of any technical terms or definitions used in the report (including definitions of artifact types, attributes, measurements, etc).
- Copy of the project brief and any other relevant information from the client outlining the scope of work etc.
- Letters of advice outlining management recommendations/opinions from community groups (e.g. Indigenous Land Councils).

10.2. Community Reports

Community reports are shorter, more accessible versions of technical or consultancy reports. Their purpose is to make archaeological information accessible to members of the wider, non-specialist community, both Indigenous and non-Indigenous. Such reports are often called “Plain English” reports, because they use clear language at a level that is suited to the average person. Such reports often require the restructuring of the original technical report so that people can find the information they want easily and so they can understand the complexities of the archaeological process. Plain English reports may even be made a condition of obtaining a consent to excavate or to destroy a site in some circumstances (usually major archaeological projects), as they are generally recognized as the best way to return the results of archaeological work to local communities.

10.2.1. Writing Style

Writing in plain English is not as easy as it sounds. It takes effort and practice to write simply without being patronizing. Plain English does not mean always using words simplistically, especially when there are other words that are more accurate, or structuring your report in a naive manner. It means writing simply, clearly and effectively. To do this, it is important to avoid using jargon, which is often just a way of showing that you are part of an in-group (and which can automatically make the reader feel part of an out-group). Archaeologists, like all other specialists, tend to write automatically in jargon and can often be unaware that their language is not obvious to outsiders. Another technique is not to use long words or sentences. If you can say something simply, then do so. Community reports can also be made more accessible through the use of photographs and diagrams to illustrate ideas and concepts rather than long, dense descriptions of the same things in words. As with any type of writing, the best strategy is to look at some examples, decide on the ones that you think work well, analyze how they are constructed, and model your own work on them.

An important part of good writing is choosing language that doesn’t offend the audience. Language is a powerful tool, and it is important to use it in ways that empower people, rather than stereotype or trivialise them. Government departments, universities and many private businesses in Australia have policies requiring the use of non-discriminatory language. *The Style Manual for Authors, Editors and Printers*, published by the Australian Government Publishing Service (AGPS, 2002:112) has the following definition:

Language use is discriminatory when it makes people invisible; when it excludes them, or highlights only one characteristic to the exclusion of other often more relevant ones; when it stereotypes people; treats people asymmetrically; and denigrates or insults people.

While there are numerous publications dealing with gender bias in language, there are relatively few that deal with racial bias in language as it applies to Indigenous

Australians. However, comprehensive coverage of these issues is available in the book *Teaching Aboriginal Studies* (Craven, 1999).

Apart from this, it is important to remember that the quality of your community report, like any other form of archaeological writing, reflects directly upon you. Even though this is a relatively informal means of communicating information, you still need to maintain high presentation standards. If the report looks sloppy, people will assume (rightly or wrongly) that you are sloppy and may be less inclined to believe you or hire you.

10.2.2. *Formatting*

The main point to remember when formatting a community report is that you are doing this for a general audience. Since your goal is to communicate ideas, it is sensible to present your report in such a way that it can be read and understood easily. The basic rule here is to make liberal use of maps, photographs and other figures, especially if you need to explain complex ideas. When you are listing figures, treat all photographs, illustrations and maps simply as “figures”, and number them consecutively within the report. A plastic cover or other simple binding will make the report more durable, especially if it will end up in a public repository, or being read by many people.

10.2.3. *Aboriginal Community Reports*

There are a number of additional factors you will need to take into consideration if you are writing a community report for an Aboriginal audience. The first is that in many Aboriginal communities it is taboo to publish photographs of recently deceased people (and sometimes people long deceased), so you will have to be especially vigilant about making sure you have permission to include any such photos in your report. The second point is that people in many Aboriginal communities in remote areas do not speak English as a first language, so you may have to produce your work as a bi-lingual report, or produce two reports, one in English and one in the local language. The third point here is that there are low levels of literacy¹ in some Aboriginal communities in remote areas, such as Arnhem Land or Central Australia, so it is a good idea to make your points through diagrams and photographs as much as you can. Ideally, the images and figures should be able to tell the story by themselves. Finally, people usually are very happy to have their images included in reports for their community, so you should try and include as many images of local people as you can. Reproduce these in color, if you can manage it financially. Our last point here is to make many, many copies of your report—everyone will want one.

¹ Clearly, this is not true for all of Australia. Literacy levels in remote regions can be particularly low, especially for older people, many of whom have attended school only sporadically, or not at all.

10.3. Academic Publishing

The principal archaeological journals in Australia are *Australian Archaeology*, the journal of the Australian Archaeological Association, the *Australasian Journal of Historical Archaeology*, and *Archaeology in Oceania*. In addition, newsletters are published by the Australasian Institute for Maritime Archaeology and the Australian Association of Consulting Archaeologists Inc (AACAI). AACAI also publishes a monograph series of major consultancy and heritage reports, with a special emphasis on successful collaborations with Indigenous communities. Access to published on-line reports in the AACAI series is restricted to AACAI members, but hard copies are available for purchase by anyone. The Research School of Pacific and Asian Studies at the Australian National University* also publishes a monograph series, while the Anthropology Museum at the University of Queensland publishes an archaeological monograph series called *Tempus*. Apart from this, there are numerous specialized archaeology journals published overseas that publish papers on Australian archaeology.

The main point to remember when writing for academic venues is that you are writing for a specialist audience. When writing in this sphere you can assume an intelligent and informed interest on their part. You should use restrained language for such publications, as this conveys the impression (correctly or not) that your research has been conducted in an objective manner. Nevertheless, don't be tricked by objective, scientific language: it does not necessarily mean objective, scientific research, just as subjective language does not necessarily mean that the research has been conducted in a non-scientific manner. In fact, you could argue that subjective language is more "scientific", since it overtly recognizes that all research has inherent biases.

Emily Smyth's Tips for Writing for Archaeological Journals

- Have a good look at recent issues of the journal you choose and see what kinds of things they publish—take note of the subjects and also the style of writing and illustration. That's a good guide to what they will be interested in publishing.
- Read the journal's Notes for Contributors *before* you submit your paper. You'd be amazed at how few submissions comply with these.
- Make sure you are submitting your paper to the appropriate journal. *Antiquity* papers, for example, should be written so as to be relevant and interesting to archaeologists working anywhere in the world, from darkest Peru to Transylvania.
- Write as concisely and as clearly as possible. Jargon impresses no one. Journals such as *Antiquity* are often pushed for space and the shorter and snappier your paper, the better its chances of being accepted.
- Have someone else read through the paper before you submit it, particularly if English isn't your first language.

- If you need to use specialist terms, define them the first time you use them. Don't expect too much prior knowledge from your audience.
- Please look at an issue of the journal when preparing your references. It surely isn't too hard to at least do them consistently, if not conforming to the journal's style. I think there have only been two papers we've published in the last three years whose references have not needed any work. Also, check that the references cited in the text match those in your reference list.
- Take care when preparing your figures. They should be clear and legible at the size at which they would appear in the journal. If you are taking digital photographs, ensure the resolution will be high enough for print (eight megapixels will give you the equivalent image quality of a 35 mm SLR camera).
- Bear in mind that the refereeing process can take several months. Try to be patient. However, do chase up your article when a reasonable length of time has elapsed. Submissions do get lost or delayed, even at the best-run journals, and journal staff won't object to the occasional enquiry about your paper's progress. The papers of rude, aggressive authors, however, go to the bottom of the pile!
- If your paper is rejected after refereeing, do ask if you can have a copy of the referees' comments, and ask why the paper was rejected. It may be that you can improve the paper in the light of the comments and resubmit successfully, or if not, the feedback should help to improve your paper for submission elsewhere.

Emily Smyth is the Editorial Manager of Antiquity.

10.4. Other Forms of Archaeological Documentation

Australian standards for project documentation are similar to those practiced in other parts of the world. Notebooks or journals are the standard means of recording the day-to-day events in the field and an adequate photographic record of sites and artifacts is essential. Rather than reiterate information that is available elsewhere, this section focuses on providing information that is specific to the situation in Australia.

10.4.1. Site Cards

Every state heritage authority has its own sets of site cards for recording basic locational, descriptive and management information about a site. These must be filled in for any new sites that you find, so that the information can be entered into the state's heritage database. In some instances, you may also need to fill out these cards for alterations to already-listed sites, such as when a known burial is reburied in a new location. Make sure you have copies of these cards with you before you

go out into the field and make sure you fill them out properly and completely when you return.

10.4.2. Photographs

The Australian standards for archaeological photography are much the same as those in other parts of the world. There are, however, a few factors that you will need to take into account here:

- The Australian light is much brighter than that of the northern hemisphere. You will need to adjust your camera accordingly, and avoid the middle hours of the day, when it is extremely difficult to get a good quality shot.
- The nature of the light in Australia impacts particularly upon artifact photography, which aims to document the technical details of an object. When taking photos of artifacts outdoors, place them in the shade if you can, to minimize contrast, or use a diffuser, as direct sun can be so harsh that details get lost. Photographs taken in direct sunlight without diffusion are unlikely to show details well as they will have high contrasts, with the light areas very light and the dark areas very dark. This may not be necessary if the day is overcast, or if the light is shadowed or hazy. If you cannot wait for an overcast day, and don't have a commercial diffuser at hand, and need to photograph small objects, you can improvise by using a large piece of paper, a white cotton shirt or sheet, or the lid of a white plastic container.
- In some excavated sites the stratigraphy may be unclear. To darken the earth and highlight differences in soil color, lightly spray the walls with water. In fact, at some Australian sites differential drying is the best way to record important stratigraphic boundaries, which may be difficult to see otherwise. If you do use spraying to enhance stratigraphic resolution, however, this should be recorded in your notes and on the photographic recording form.
- Unlike the cave paintings of Europe, rock art in Australia is usually found in rockshelters, where there is sufficient natural light to take good photographs, so there is no special challenge here. However, it is important to remember to keep the back of the camera (i.e. the plane of the film) on the same plane as the rock surface as much as possible to avoid distortion.
- Photographing Aboriginal and Torres Strait Islander people can be challenging, especially if they are dark-skinned, as it is easy to lose facial detail. This problem is exacerbated if you are taking indoor shots against a dark background or outdoor shots when the sun is directly above in the middle of the day, as the person's brow can create a shadow over their face. Again, you need to pay particular attention to the light. If you are taking indoor photographs of dark-skinned people, use a flash. If you are taking outdoor photographs of them, try and place them so they are in the shade, as this will soften contrasts. If this is not possible, use a flash.
- If you are taking a photo that includes both dark-skinned and light-skinned people, avoid exacerbating the extremes of light. The core principle in taking a

good photograph is to even out the highs and lows so that you can capture all the detail of both bright and dim areas.

- There are many ethical issues involved in photographing human subjects, particularly Indigenous populations, and you will need to be especially vigilant about obtaining permission to photograph, and permission to publish a photograph (note these are two different things). Further information on this is given below.

10.4.3. Archiving an Archaeological Project

Full and accurate archiving is an important part of professional archaeology. Records are more than just data or information. They are kept to provide evidence of a particular action and are inextricably tied to those actions and their consequences, and to the broader functions and activities they document (Roberts, 1997). The Australian standard of best practice in record keeping is the Australian Records Management Standard (AS 4390-1996) which is the basis for recently developed international and Australian records management systems (Roberts, 1997).

Any archaeological work in Australia will involve the lodgment of a range of documents and reports with appropriate government bodies. You will need to establish what the requirements are for the state in which you are working (e.g. how many copies they will require and in what format), through contacting the appropriate heritage office for that state. You may also need to lodge copies of your reports in local libraries, Aboriginal Land Council libraries and with local heritage organizations. Also, knowledge of Indigenous places and ownership of these places are two different things—while you can hand over knowledge, you cannot necessarily hand over ownership of that knowledge.

In addition, if you're working on a consultancy project, it is the client funding the research who technically owns the archive that derives from your work (but not the government forms you have to lodge, of course), and you therefore have some responsibility to turn the contents over to them (but not necessarily the intellectual property depending on the terms of your contract). This raises two thorny problems: "Who owns the intellectual property generated by your project?", and "What are the ethical responsibilities for keeping project archives accessible?" In general it is unethical for you to retain exclusive rights to information that you have been paid to collect as part of a project, unless this has been clearly identified as a necessary part of the process (for example, when Indigenous people request that information be protected as sensitive), or has been written into your contract. This does not mean that any subsequent academic papers or publications, written by you from your data, are "owned" by anyone else. In general, the information you collect while in the field is technically the property of whoever funded the project, while you own what you do with that material (i.e. your interpretations, synthesis or publications). In addition, while it is very easy to say that you should turn the contents of your archive over to the funding body, this may not always be the best outcome. If you're working for a small client, for example, they may not wish to be burdened with a whole lot of extra paperwork, or may have no facilities for storing

this appropriately, and by turning it over to them, you may actually run the risk of preventing any future researchers from ever having access to those data again (including yourself!). Unfortunately there is no central repository in Australia for this kind of primary information, and you will have to judge for yourself what is best for the long-term storage of your archive. If you are working for government departments, such as the Department of Environment and Conservation in NSW, there may be an expectation on their part that you gift them with the archive, but they will usually make this clear in the project brief.

10.5. Publishing and Intellectual Property

In conventional western legal terms, intellectual property rights refer to copyright, patents, trademarks, designs and trade secret laws, and breach of confidence. Western intellectual property rights systems are based on the notion of individual property rights, which can be subject to transactions, and which are designed to foster commercial and industrial growth. It is particularly important to consider these systems when undertaking archaeological projects, particularly those involving Indigenous people and their cultural heritage, as they are conceptually limited in their ability to offer recognition and protection of Indigenous intellectual property rights.

10.5.1. Indigenous Intellectual Property Rights and Archaeology

One of the principal issues facing contemporary archaeologists working in Indigenous Australia is that of Indigenous intellectual property rights, a subject that is closely linked to Indigenous rights to control research on Indigenous cultural heritage. This is referred to in the United Nations' Draft Declaration on the Rights of Indigenous Peoples (Part Six, Article 29), which affirms that:

Indigenous peoples are entitled to the recognition of the full ownership, control and protection of their cultural and intellectual property.

They have the right to special measures to control, develop and protect their sciences, technologies and cultural manifestations, including human and other genetic resources, seeds, medicines, knowledge of the properties of fauna and flora, oral traditions, literatures, designs and visual and performing arts (United Nations, 1994:PART VI, ARTICLE 29:9).

This issue crystallized for Australian archaeologists when the Tasmanian Aboriginal woman, Ros Langford, published her views in the mainstream journal, *Australian Archaeology*:

You seek to say that as scientists you have a right to obtain and study information of our culture. You seek to say that because you are Australians you have a right to study and explore our heritage because it is a heritage to be shared by all Australians, white and black. From our point of view we say you have come as invaders, you have tried to destroy our culture, you have built your fortunes upon the lands and bodies of our people and now

having said sorry, want a share in picking out the bones of what you regard as a dead past. We say that it is our past, our culture and heritage, and forms part of our present life. As such it is ours to control and it is ours to share on our terms (Langford, 1983:2).

Even today, this paper is cited widely in mainstream texts (e.g. Hodder, 1999), making it arguably the most influential paper in Australian archaeology in terms of establishing the parameters for ethical conduct when working with Aboriginal cultural heritage. By writing within the discourse of the discipline, Langford engaged directly with its practitioners, thus shaping how Australian archaeology would develop. This laid a foundation for the level of control that Indigenous Australians now have over their cultural heritage.

On behalf of the Aboriginal and Torres Strait Islander Commission (ATSIC) and AIATSIS, Janke (1999) undertook a major study of Indigenous cultural and intellectual property. She concluded (Janke, 1999:11–12) that Indigenous cultural and intellectual property includes:

- Literary, performing and artistic works (including music, dance, song, ceremonies, symbols and designs, narratives and poems).
- Languages.
- Scientific, agricultural, technical and ecological knowledge (including cultigens, medicines and sustainable use of flora and fauna).
- Spiritual knowledge.
- All items of moveable cultural property², including burial artifacts.
- Indigenous ancestral remains.
- Indigenous human genetic materials (including DNA and tissues).
- Cultural environment resources (including minerals and species).
- Immovable cultural property (including Indigenous sites of significance, sacred sites and burials).
- Documentation of Indigenous peoples' heritage in all forms of media (including scientific, ethnographic research reports, papers and books, films, and sound recordings).

Copyright over Indigenous cultural and intellectual property is a topic of current debate internationally (see Janke, 2003; Meskell & Pels, 2005; Nicholas & Bannister, 2004). In Australia, the development of ethical guidelines by the NHMRC, Aboriginal Health Ethics Committee and AIATSIS has significantly improved the conduct of research in Indigenous Australian communities, through increasing Indigenous participation in, and control over, the research process (see Gow, 2003). Recognition of the rights of Indigenous Australians to control their cultural and intellectual property is also apparent in the following statement on the web site of the Australian Museum (www.austmus.gov.au):

Permission to re-tell the “Stories of the Dreaming” can only be given by the custodian/s of each story, in consultation with their community. That permission has been granted to the Australian Museum, by the relevant custodians and/or communities. The Australian

² As defined by the UNESCO Cultural Properties Convention 1970.

Museum only has the right to use these for this website only. The Museum cannot transfer this right to others.

If you want to use the stories in any other way than access through this website you will need to contact the relevant state or territory land councils to gain permission from the story owners. The Museum cannot give you this information.

Copyright in this site rests with the Australian Museum and *no part of this site may be reproduced*. The Australian Museum *cannot* grant permission for re-use of the stories in any form.

Copyright in the individual stories rests with the owners of each story and the stories may not be told or altered in any way without their permission.

It can be very distressing for an Indigenous community to find cultural material, whether story, artifact, painting, etc., in the public domain without consent. As with the secret/sacred stories outlined above, each community places controls on who can have access to cultural information.

Intellectual property laws recognise the right of the owners to claim copyright over the stories on this site (Australian Museum, 2004, emphasis in original).

A similar ethos is apparent in the wording used in many Australian television broadcasts when dealing with sensitive material, or at the beginning of books about Aboriginal people (e.g. Paisley, Haskins & Cole, 2005). While not elaborate, measures such as these are powerful, because they are based on respect for Indigenous values, an attitude that feeds back into the general public's perceptions of Indigenous Australians.

10.5.2. Obtaining Permission to Publish

Publication often involves obtaining permission to publish one or more aspects of the work. Sometimes this will be a personal communication, or a photograph of an individual or group. At other times, it will be re-publication of an image, a painting or a diagram. In all of these cases, you will need to seek permission from the person who holds copyright over the image. You would normally own copyright of an image if you take the photograph or video recording yourself, or have paid someone to take these images or draw them for you. Consent forms are not legally required for this kind of reproduction, unless it is to be used for commercial purposes, but it is good practice to obtain verbal or written consent from the people involved, especially if sensitive, personal or private information is revealed in the photograph or corresponding caption. When obtaining permission to publish, it is important that you obtain the informed consent of the relevant people. Obtaining consent in research is a process, not an event. The notion of informed consent exists to protect the subject, not the researcher. It is important to remember you have:

... no special entitlement to study all phenomena; and the advancement of knowledge and the pursuit of information are not in themselves sufficient justifications for overriding the values and ignoring the interests of those studied (Association of Social Anthropologists' Ethical Guidelines for Good Research Practice, www.asa.anthropology.ac.uk).

Informed consent means that people must understand the complete context of the publication—i.e. the context in which the image or information will be published, what it will look like when published, who will see it, how widely available it will be, and the fact that it may be available for a very long time. Even if the project has been solicited by the Indigenous community themselves, you will still need to ensure that everyone is happy with how you have used the information and how it will be presented to outsiders.

You need to be especially cautious when taking photos of Indigenous Australians, who may be suspicious of researchers, due to a history of infringements upon their rights (see Gow, 2003). Table 10.1 provides some guidelines for when you will need to obtain verbal or written consent for taking photographs—a central concern when working with Indigenous peoples. It has been adapted from the guidelines of the Bloomberg School of Public Health/Center for Communication Programs, at the John Hopkins University.

You should use this table as a starting point for thinking broadly and practically about the ethical considerations involved in photography. *It is crucial that you remember that permission to take a photograph is not permission to publish.* If you find you want to publish the photograph, you will have to go back to the individuals involved and seek separate permission, or obtain that permission separately

TABLE 10.1. Guidelines for obtaining consent for photographs

Consent not needed	Verbal consent needed	Written consent needed
Non-recognizable individuals in public (faces and all other identifying features are obscured).	All individuals in all settings when possible.	Recognizable individuals.
Public figures in public contexts (e.g. celebrities at formal parties, politicians at political gatherings).	Parents or guardians of children. Directors or managers of organizations or service programs. Landscapes in areas of Aboriginal Trusts (e.g. Arnhem Land, Beswick Land Trust). Residences or public buildings in Aboriginal communities.	Recognizable or non-recognizable individuals in any setting where personal, private information is exposed in the photo or documented in the corresponding caption, such as: <ul style="list-style-type: none"> • Health status • Health behavior (e.g. sexual orientation, alcohol and drug use) • Criminal behavior (e.g. perpetrator or victim of violence).
Crowds in public (e.g. an audience at an outdoor concert).	Crowds in semi-private situations (e.g. Aboriginal people attending a funeral; archaeologists at a conference).	Parents, guardians, or teachers of children in school settings.

in advance (remembering that you may need to return to the community to get approval in context at the stage of proofs). If you wish to publish a photograph of Aboriginal people or Aboriginal lands, you can expect that you will have to pay for this privilege, either to the people themselves or to the traditional owners of the lands. This is consistent with international practice for ethical development photography (see <http://www.photoshare.org/phototips/developethics.php>). Examples of generic consent forms for conducting interviews and for taking photographs are contained in Appendix 4. However, obtaining written consent is not a simple matter, and in some cases, it is not practical at all. For example, you may wish to publish an image of a colonial citizen, and you would like to consult with their descendents, but you have no idea who they might be. Or you may have taken a photograph of people in a crowd, which turned out to be publishable, but you have no idea of who they are, so you cannot track them to obtain their consent to publish the image. Moreover, sometimes seeking written consent will make people fear you are going to use the photos for strange or nefarious purposes. However, if you are in a situation where you need to obtain written consent, consider these tips:

- Prepare your consent forms ahead of time.
- If people are not literate, ask them to make a mark on the consent form. If they do not want to do this, seek verbal permission, and ask a literate witness to sign the document and confirm that the form was read to the subject and consent given.

10.5.3. Seeking Indigenous Permission to Publish

A major development in recent years concerns Indigenous people's control over the publication of material. While much discussion has focused on Indigenous control over the publication of secret or sacred information (e.g. *The Aboriginal and Torres Strait Islander Heritage Protection Bill 1998*), the outcomes of this process have also informed views on the publication of more general aspects of Indigenous cultures. Up until the 1970s, Indigenous peoples had virtually no control over material published on their society. Early research was conducted during a time when Aboriginal people were expected to either die out or be integrated into the dominant society. Based upon the assumption that information not recorded in writing would be lost forever, many scholars (e.g. Mountford, 1976) appear to have assumed that by publishing important (i.e. secret) information they were preserving it for future generations of Aboriginal and non-Aboriginal people. There was no notion that Aboriginal systems of knowledge could flourish, or any recognition that such flourishing would depend on Aboriginal people retaining control over their cultural and intellectual property. There was also an assumption that Indigenous people would not see the published product, or if they did, that they would agree with the European paradigm.

In Australia, a turning point was reached when the Pitjanjatjara people used a breach of confidence action to successfully contest publication of Mountford's (1976) *Nomads of the Western Desert*, which contained secret-sacred information that could not be viewed by women, children or uninitiated men. In *Foster*

v Mountford members of the Pitjantjatjara Council obtained an injunction to prevent the book being distributed in the Northern Territory on the basis that the information it contained could only have been shown or exposed to the author in confidence. In addition, the plaintiffs successfully argued that the “revelation of the secrets contained in the book to their women, children and uninitiated men may undermine the social and religious stability of their hard-pressed community” (Australian Government Attorney General’s Department, 1994). While this case was not argued on the basis of copyright, another major step occurred in 1988—Australia’s Bicentennial year—when the artist John Bulun Bulun, and other Aboriginal artists from the Northern Territory brought an action concerning the unauthorized reproduction of their artworks on T-shirts. Throughout Australia, Indigenous designs and imagery are owned by Indigenous artists, and therefore subject to Indigenous intellectual copyright. A series of copyright cases was the subject of a groundbreaking exhibition curated by Vivien Johnson of Macquarie University (see Johnson, 1996a, 1996b), which brought enormous public attention to the matter, informing the views of both Indigenous and non-Indigenous Australians.

There can be no doubt that these high profile cases influenced both Aboriginal and non-Aboriginal attitudes to publication, and in Australia it is absolutely accepted that you cannot publish secret Aboriginal knowledge under any circumstances. This has ramifications for the publication of secular material as well, and Australian scholars are very careful that they have the appropriate permissions to publish on Indigenous cultural heritage. In our own work (e.g. Jackson & Smith, 2005; Smith, 2004), Aboriginal Elders have control over the content of publications. We recommend this as a way of dealing fairly with Indigenous intellectual property issues and also of making sure that you do not have political problems because you have inadvertently published sensitive material (which would adversely affect your reputation in Australia).

When publishing a paper or book you need to seek formal permission for both text and images, firstly on the draft and secondly when you have proofs. Sometimes permission may be rescinded at the point of proofs, and you’ll have to accept this, but if you have consulted properly in the first place, this is unlikely to happen, unless someone has died and the community does not want their image publicized. The best way to get permission is to make a return trip to the community, as this gives you an opportunity to obtain permission from the range of people who will be affected by the publication. However, much archaeology is conducted in rural or remote communities, and if you cannot return to the community to get permission, one approach is to mail or fax the images, and phone up to see if you have permission to publish them. If you are not able to get in touch with the right people, you will have to wait, or not use that image. You cannot assume that you have permission. Aboriginal people are likely to have particular concern about the use of information through photographs or other visual media such as videos. In a society that still has sectors in remote communities that are non-literate, photographs and other visual material are particularly subject to

scrutiny. Moreover, it would seem self-evident that you should return copies of all publications to the individuals involved, to Community Councils and to associated organizations.

10.5.4. Sharing the Benefits

Recognition of Indigenous peoples' rights to protect their cultural and intellectual property and to share knowledge on their own terms, also implies that they have a right to share fairly in the benefits that derive from research. The system inherited from colonial structures, however, is one in which academics accrue the long-term benefits of research, while Indigenous people get no benefits, or only short-term ones. Yet much archaeological research is informed by Indigenous knowledge, and a great deal of it could not be produced without the assistance of Indigenous people. While archaeologists may bring skills to a project, often they do not provide the knowledge or primary data. It follows that both Indigenous people and archaeologists have rights in the intellectual property that arises from such research, since both were essential to the outcome. One way to conceptualize this is to think of research as a kind of soup, in which different people provide essential ingredients. Though there may be a "chef" (the researcher, either non-Indigenous or not), that particular soup could not exist without the full range of ingredients (both Western and Indigenous knowledges), and all the people who provide those ingredients have rights in that soup.

In the past, researchers often did not pay Aboriginal people, partly due to a belief that all people have a responsibility to contribute to the "growth" of knowledge. More recently, Aboriginal people have been arguing for a share in the benefits of research and have insisted upon financial compensation for their time and knowledge. Aboriginal people are fully aware that academic careers are built on their knowledge, and sometimes characterize anthropologists and archaeologists as "mining" Indigenous knowledge (Isaacson, 2003; Isaacson & Ford, 2005; Smith, 1999). From this viewpoint, researchers extract knowledge from the community and take it back to the academy to turn it into something else, without further consultation with, or input from, the community. This process should be discontinued. In a contemporary world, Indigenous people should share in both the short-term and long-term benefits of research.

Even when Indigenous people share in the short-term benefits, they rarely share in the long-term ones. There are several factors that have contributed to this: the time delay between fieldwork, publication and promotion; that the benefits of scholarship are acquired indirectly; the distance between fieldwork locales and universities; and that the research product has a different shape to what is created in the field. The critical point here is that benefits can emerge some time after the fieldwork has been undertaken, sometimes many years afterwards, and can be accrued indirectly. The time lapse between fieldwork and research outcomes contributes to researchers forgetting or minimizing Indigenous contributions. This is facilitated by the fact that researchers normally live away from the communities

they research. Regular visits to communities in remote areas can be expensive and, as the ties of communication are loosened so, too, is the researcher's sense of obligation to the community. This situation is exacerbated by the fact that many of the benefits of research are accrued indirectly. While academics rarely get paid to publish an article, their publication record contributes to promotion and higher salaries. That the reward is delayed, not immediate, does not mean that the Indigenous people who were essential to the process should not participate in the benefits that accrue.

Archaeologists receive direct financial benefit from publications, such as book royalties and indirect benefits through their publications contributing to their employment, tenure and promotion opportunities. While the Indigenous people who contributed to the archaeological research normally do not receive these indirect forms of payment, they do have a right to receive direct remuneration. It is a simple matter to share the financial rewards that come from publication, simply through paying a fee for permission to publish images or articles, or through royalty payments. In our research with the Barunga-Wugularr communities of southern Arnhem Land, in the Northern Territory, and with the Ngadjuri people in South Australia, we pay for each image that is published of the people, their sites, or their land. The amounts range from \$A100 (about \$US75) to \$A400 (about \$US300), with the lower rate for each photo of an individual or site, and the higher rate for cover images for books or images of several people, at a rate of \$A100 (\$US75) per person. We make payments to the senior traditional owner, the senior traditional custodian or the individuals in the images, and permission is re-sought any time we wish to re-publish the image. For an entire book, this can be expensive, but it is possible to apply for publication subsidies to cover these costs—and as a last resort, to pay this from the salary that derives from doing research with these Indigenous people. Paying them when you publish an image is one small but systematic way of sharing the benefits. In terms of royalty payments, if the published outcome derives from work with one particular community, it makes sense that the royalties be directed to that community, which we have done with a video documentary and book based on our work at Barunga (Smith, 2004). However, if the research is situated in more general discussions, the royalties can be directed to a general fund. David Hurst Thomas, for example, directs the royalties from *Skull Wars* (2000) to the Society for American Archaeology's Native American fund. Along similar lines, royalties from the World Archaeological Congress' *Indigenous Archaeologies Series* with AltaMira (see www.altamira.com/series/indigenous) are used to support the attendance of Indigenous people at meetings of the World Archaeological Congress.

Mitch Allen's Eight Publishing Lessons

1. IT DOESN'T ALL HAVE TO GO IN A BOOK. Think in terms of the *project* and your *audiences*. You don't have a book or an article, you have a body of research that needs publishing. This research will appeal to different audiences in different ways. Your first job in getting published is to identify the scope of your project, what audiences there are for different parts of it, and

- what products would best reach those audiences. Thus, your regional survey might eventually become a pamphlet for the local community, a policy paper for the municipal administration, a magazine article in a popular heritage publication, a grey literature report or website for your colleagues, and a book for archaeology students. Each contains data relevant to the audience in a style they will be able to read; no single publication contains the whole study.
2. **“SELL” YOUR IDEA.** Editors won’t often come to you asking for your latest work. Part of your job is to “sell” your ideas to the journal editor or book publisher with whom you want to work, who are usually bombarded by others just like you. Thus, it is as important to network with editors as to write the material. Prepare a brief pitch to them about what you want to write and why they should publish it. There’s an apocryphal story about a Hollywood movie mogul who insisted that anyone who accosted him write their movie idea on the back of their business card. If they couldn’t explain it in a small space, then they probably hadn’t thoroughly developed the idea. The good news? Journal editors and book publishers are always looking for good things to publish.
 3. **DO YOUR HOMEWORK.** Take a fraction of the time you spent on researching your study to investigate the best potential publication outlet for your article or book. Look at the journals that you cite in your work, look at the names of the publishers whose books you buy and whose catalogs you have not thrown out. Examine who attends the meetings you attend and who advertises in the journals you read. Ask your colleagues about their experience with different publications and publishers. Create a list of priorities—prestige, speed of publication, distribution, royalties (if a book), international contacts, specialized markets they address—and see which outlets best meet those priorities. Then contact the journal editor or acquiring editor at the publisher and ask them about their fit with your priorities. If they’re interested, they will probably want your work to take a specific slant or approach. In negotiating the direction of the final publication with them, you are making it much more likely that they will accept your work. If they’re not interested, or if they cannot do what you want them to do, you don’t have to waste time submitting your work to them.
 4. **THERE’S MORE THAN ONE PATH TO YOUR GOAL.** There are multiple appropriate venues for any good idea. The norm is that you will submit an article to only one journal at a time. But, if you’ve done your homework, you’ve identified the second place you can submit an article if the first journal doesn’t accept it. And, rather than spending inordinate amounts of time revising your piece beyond the point of recognition if the reviews are nasty, it is sometimes wise to withdraw the article and send it elsewhere. If a book publication, you are usually not bound by the rule of submitting to only one publisher at a time. In fact, multiple submissions may create a competition between presses for your book, which will only work to your advantage.
 5. **WRITE FOR A SPECIFIC READER.** Most scholars write their work for their Worst Nightmare Critic (WNC), the person most likely to rip your ideas

and data to shreds. This helps explain why most academic writing is so turgid and defensive. Forget about him (sic), he won't buy your book anyway. Instead, write for the ideal audience that you think might be interested in your writing. Personify that audience. Imagine a specific reader—a student, younger colleague, friend—who you want to tell this story too. Put their photograph on your monitor and write to them.

6. **SHAKESPEARE PROBABLY KNEW SOMETHING ABOUT WRITING.**

If you're going to be writing, you may as well do it well. Look at the works of real writers, the ones who use figurative language, different points of attack, varying lengths of sentences and paragraphs, flashbacks and foreshadowing, and other tricks of the trade. There is something to be learned here about constructing an interesting narrative. If you are able, join a writer's group so you can give and receive some useful critiques on your writing style, the way your archaeological colleagues would critique your research.

7. **YOUR JOB DOESN'T END WHEN YOU'VE TURNED IN THE MANUSCRIPT.**

Editors will usually need your attention during production—proofreading, answering questions, indexing. Be quick, responsive, and cooperative. That's one way to help ensure they will take your next publication. And, while scholars usually assume that it is up to the publisher to advertise their work, publishers know that you are its best salesperson. Present papers on the topic of your recent publications at professional conferences. Suggest places to send your book for review. Send flyers about your book to friends and colleagues. Compile a personal mailing list for their marketing efforts. Connect your local press with international publishers to have the work distributed overseas, translated, marketed beyond their normal scope. The wider the distribution, the more mileage you will get out of it.

8. **IT'S NOT BRAIN SURGERY.**

Above all, enjoy the process. It is very rare that lives are saved or lost in publishing archaeology. Using some of the strategies listed above might make it a more pleasurable experience.

Mitch Allen is the founder and publisher of Left Coast Press Inc, based in Walnut Creek, California.

References and Further Reading

- Australian Government Attorney General's Department (2005). *Stopping the rip offs*. http://www.ag.gov.au/agd/WWW/securitylawHome.nsf/Page/Publications_Intellectual_Property_Stopping_the_Rip_Offs_Report.
- Australian Museum (2004). Australian Museum online. Indigenous Australia, Copyright: www.amonline.net.au.
- Bloomberg School of Public Health/Center for Communication Programs, John Hopkins University: www.photoshare.org/phototips/developethics.php. Development Photography Ethics.

- Byrne, D. (1997) *Aboriginal cultural heritage: Standards and guidelines kit*. Sydney: NSW NPWS: www.nationalparks.nsw.gov.au/npws.nsf/Content/Publications.
- Craven, R. (1999). *Teaching Aboriginal studies*. Sydney: Allen and Unwin.
- Fagan, B. (2006). *Writing archaeology: Telling stories about the past*. Walnut Creek, California: Left Coast Press.
- Gow, G. (2003). Ethical research in Indigenous contexts and the practical implementation of it: Guidelines for ethical research versus the practice of research. Paper presented at the Australian Association for Research in Education annual conference. Available online at: <http://www.aare.edu.au/03pap/gow03579.pdf>.
- Hodder, I. (1999). *The archaeological process. An introduction*. Oxford: Blackwell.
- Isaacson, K. (2003). Building for the future. In T. Peck & E. Siegfried (Eds.), *Indigenous people and archaeology. Proceedings of the 29th annual Chacmoool conference* (pp. 245–250). Calgary: the Archaeological Association of the University of Calgary.
- Isaacson, K. & Ford, S. (2005). Looking forward—looking back. Shaping a shared future. In C. Smith & H.M. Wobst (Eds.), *Indigenous archaeologies: Decolonizing theory and practice* (pp. 352–366). London: Routledge.
- Jackson, G. & Smith, C. (2005). Living and learning on Aboriginal lands: Decolonizing archaeology in practice. In C. Smith & H.M. Wobst (Eds.), *Indigenous archaeologies: Decolonizing theory and practice* (pp. 326–349). London: Routledge.
- Janke, T. (1999). *Our culture. Our future. Proposals for the recognition of Indigenous cultural and intellectual property*. Canberra: Australian Institute of Aboriginal Studies and the Aboriginal and Torres Strait Islander Commission.
- Janke, T. (2003). *Minding culture. Case studies on intellectual property and traditional cultural expressions*. Washington, D.C.: World Intellectual Property Organization.
- Johnson, V. (1996a). *Copyrites: Aboriginal art in the age of reproductive technologies touring exhibition 1996 catalogue*. Sydney: National Indigenous Arts Advocacy Association and Macquarie University.
- Johnson, V. (1996b). *The house of Aboriginality CD-ROM; Copyrites: Aboriginal art in the age of reproductive technologies touring exhibition 1996 catalogue*. Sydney: National Indigenous Arts Advocacy Association and Macquarie University. www.mq.edu.au/house_of_aboriginality.
- Langford, R. (1983). Our heritage—your playground. *Australian Archaeology*, 16, 1–6.
- Luey, B. (2002). *Handbook for academic authors*. 4th edition. Cambridge: Cambridge University Press.
- Meskill, L.M. & Pels, P. (Eds.) (2005). *Embedding ethics: Shifting the boundaries of the anthropological profession*. Oxford: Berg.
- Mountford, C. (1976). *Nomads of the western desert*. Adelaide: Rigby.
- Nicholas, G. & Bannister, K. (2004). Copyrighting the past? *Current Anthropology*, 45, 327–350.
- Paisley, F., Haskins, V., & Cole, A. (Eds.) (2005). *Uncommon ground: White women in Aboriginal history*. Canberra: Aboriginal Studies Press.
- Roberts, D. (1997). The new Australian records management standard. Paper presented at the Annual Meeting of the National Association of Government Archives and Records Administrators (NAGARA), Sustainable Change: Getting to the Heart of Our Challenge, held in Sacramento, California. Available online at: <http://www.records.nsw.gov.au/publicsector/rk/sacramento/sacramento.htm>.
- Smith, C. (2004). *Country, kin and culture. Survival of an Australian Aboriginal community*. Adelaide: Wakefield Press.

- Smith, L.T. (1999). *Decolonizing methodologies. Research and Indigenous peoples*. Second edition. London: Zed Books.
- Thomas, D.H. (2000). *Skull wars. Kennewick man, archaeology and the battle for Native American identity*. New York: Basic Books.
- United Nations (1994). Draft United Nations declaration on the rights of Indigenous peoples (Part Six, Article 29): www.cwis.org/draft9329.html.

Key Guides and Resources

- Aboriginal Affairs Victoria: <http://www1.dvc.vic.gov.au/aav/heritage/forms>. This site includes good examples of a range of heritage forms.
- Ask Oxford: www.askoxford.com includes lots of excellent tips for writing well. This site also provides the key points of each book in the One Step Ahead series.
- Department of Indigenous Affairs, Western Australia: <http://www.dia.wa.gov.au/Heritage/HeritageManual/default.aspx>. This site contains their Aboriginal heritage procedures manual and other material relevant to documenting Indigenous heritage in Western Australia.
- Standards Australia: www.standards.com.au. Australia's national standards body. The Australian Records Management Standard can be obtained from this organization.

Glossary

This is a brief glossary of key terms mentioned in the text and supporting information that may be useful for you to know (such as the names of some basic types of Aboriginal artifacts). It also includes specialist terms used in Australia for which there are known US and UK equivalents.

Flaked Stone Artifacts

Backed "Blade". A small stone artifact with the margin opposite to the working edge deliberately blunted to form a penknife-like back.

Bondi Point. A small (<5 cm long), asymmetrical triangular blade with a thick, trimmed back. First found at a site in Bondi, Sydney, they were not being used at contact but some appear to have been hafted. They are often referred to generically as "backed blades".

Core tool and scraper tradition. A characterization of the early (i.e. Pleistocene, but extending into the mid-Holocene) stone artifact assemblages found in Australian sites. First described at the site of Lake Mungo in 1970, the core tool and scraper tradition supposedly consists of chunky, high-domed cores (called "horsehoof cores" because of their flat striking platform and step fractured sides) and small, steep-edged scrapers. The Core Tool and Scraper Tradition is not generally believed to be a unitary phenomenon, although early stone artifact assemblages do share many common characteristics. While it was once well-accepted, Australian archaeologists now rarely use it.

Eastern Regional Sequence (ERS). A sequence of technological change proposed for south-eastern Australia. First proposed in the 1940s, and revised several times since then, the ERS is separated into four periods: *the Capertian or pre-Bondaian* (pre-5,000 BP), which consists of large, heavy artifacts and unifacially flaked cobbles; *the Early Bondaian* (c5,000–3,000 BP), when backed artifacts and ground edged axes appear, along with the use of silcrete and chert as raw materials; *the Middle Bondaian* (c3,000–1,000 BP), when backed *Bondi points* are numerous; and *the Late Bondaian* (c1,000 BP-contact), when bone points, shell fishhooks, and a particular type of backed artifact called an *Elouera* are common. Although Australian stone artifact analysis tends not to use typologies

as a main descriptive tool, the ERS is a notable exception, although it is not used by all archaeologists.

Elouera. Distinctive backed artifact with a thick dorsal edge leading it to resemble an orange segment.

Hammerstone. A stone used to detach flakes from a core. Synonymous with flaking tool, or “flaker”.

Kimberley Point. A distinctive, bifacially flaked point resulting from a combination of percussion and pressure flaking to produce a shallow, leaf-shaped point with a serrated margin. As their name suggests, Kimberley points were only made in north western Australia, but were high status trade items at contact. After contact they were made using European materials, such as glass and porcelain. Many other pressure-flaked points were made in the Kimberley region; Kimberley points are merely one extreme form.

Knapping. The process of making a stone artifact, usually by percussion flaking, or striking a *core* (any suitable piece of raw material) with a *hammerstone*. Subsequent to this the knapping process can also involve pressure flaking, or the application of gradual force to the surface of the artifact with a pointed object. Synonym for chipping, or flaking.

Knapped artifact. Any stone artifact produced by the knapping process. Synonym for chipped artifact.

Knapping floor. The artifactual debris left behind in one place by the action of *knapping*. Synonym for flaking station or chipping station.

Pirri Point. A small unifacially flaked stone point, generally used as a spear tip.

Point of Force Application. The point at which external force (*percussion flaking*) is applied to a core to cause it to fracture. Synonym for point of percussion.

Small Tool Tradition. A characterization of the Holocene stone artifact assemblages found in Australian sites. From the mid-Holocene onwards, artifacts were supplemented in some places by the introduction of *backed artifacts* and/or various kinds of points (such as *Kimberley*, *Pirri* and *Bondi points*), as well as the spread of ground stone axes and flaked stone adzes. Distinctive technological features of the Small Tool Tradition include the use of *pressure flaking* in certain areas, the manufacture of blades and a general reduction in artifact size. Many Australian archaeologists do not believe that there is a Small Tool Tradition because, 1) each artifact type enters the scene at a different time; and 2) each artifact type is found only in some parts of the country.

Tula. Distinctively shaped round flake with a large bulb of percussion, a broad platform and a convex cutting edge. The edge wears down with use and so has to be continually resharpened, producing an equally distinctive looking, worn out “slug”, with a concave, crescent-like shape and multiple flake scars. These were used in arid zones from the late Holocene onwards and were still in use at contact. Because they were hafted on the platform edge to a wooden handle, they are often referred to as “tula adzes”, although they were also used as scrapers.

Kartan. A stone artifact tradition distinctive to sites on Kangaroo Island and the adjacent mainland in South Australia. The Kartan consists of a localised combination of *Core Tool* and *Scraper Tradition* types, including *horsehoof cores*,

large flaked pebbles knapped on one side only, and large, waisted pebble “choppers”. From “Karta” (literally meaning “lap”, but also used to refer to a “spirit place”, hence the common translation as “island of the dead”), the Ramindjeri name for Kangaroo Island.

Other Aboriginal Artifacts

Coolamon. Shallow wooden container shaped from a concave slab of bark or wood and used as a bowl or dish.

Spear thrower. A lever made of wood, with a hook or peg fixed to one end, designed to increase the speed at which a spear can be thrown. Spear throwers are sometimes referred to popularly as “woomeras” (although this term comes from a particular NSW dialect word). It is thought that spear throwers were adopted during the Holocene, but only in some parts of Australia; for example they do not appear to have been used across most of southern and eastern Queensland, parts of NSW, the arid zone, and Tasmania.

Gunyah, wirly (or wurly), mia-mia, humpy, lean-to. All forms of temporary bough-framed shelter used by Aboriginal people in various parts of Australia. Gunyah comes from the Dharug language (Sydney area), humpy from Yagara (Brisbane), and wurley from Gaurna (Adelaide). Mia-mia is a Victorian (Wathawurung) word used around Port Phillip Bay. All of these terms were subsequently adopted by European settlers to apply to any form of temporary shelter. “Lean-to” refers to the characteristic feature of many such dwellings, which relies on placing branches, leaves, bark, or other materials across angled poles.

*See the Aboriginal Collection Gallery for images of these and many other Australian artifacts: <http://www.amonline.net.au/collections/aboriginal/gallery.cfm>.

Archaeological Procedures

Rubbish dump. Synonym for trash pit or midden.

Sieving. Synonym for screening or sifting.

Reconnaissance survey. Any non-intrusive technique for locating sites/artifacts in the field and assessing the archaeological potential of the area. Often referred to as a pre-disturbance survey in South Australia.

Transects. Linear segments of a field survey area. These are usually walked by pedestrian survey in the search for sites/artifacts. Synonym for fieldwalking transect, walkover survey, or pedestrian walkover.

Rock Art

Bradshaws. Rock paintings of lithe figures, often dancing or moving elegantly, found in the Kimberley region of Western Australia.

Engravings. Synonym for petroglyphs.

Finger flutings. Sets of parallel marks made by human fingers in soft stone. Found throughout the limestone caves of the Nullabor and adjacent regions, such as Mt Gambier in South Australia.

- Mimis*. Rock paintings of tiny figures, found in the Top End of the Northern Territory. These appear to be stylistically related to the Bradshaw paintings.
- Paintings*. Synonym for pictograph.
- Panaramittee*. A style of rock engraving with a high percentage of geometric motifs and animal tracks, named after the site type at Panaramittee Station, South Australia.
- Wandjinas*. Large, polychrome paintings of ancestral beings, found in the Kimberley region of Western Australia.

General Terms

- Ancestral beings*. The creatures that created the features on the landscape during the creation era, known as the *Dreaming*.
- Community ownership*. The degree to which the research is grounded in the community as evidenced by attendance, participation, volunteer support, contributed income support, and interaction with the entire community.
- Community archaeology*. A form of archaeology undertaken collaboratively with the local community, such that the goals, processes and outcomes are shaped by both community and archaeological agendas. Sometimes erroneously called public archaeology. A definitive aspect of community archaeology (as opposed to normal public outreach and education) is that it provokes critical self-reflection by the community as well as by the archaeologist and can provide a catalyst for change.
- Community reports*. Shorter, more accessible versions of technical or consultancy reports, written in plain English to convey information to members of the community, either Indigenous or European. Synonym for plain English reports.
- Cultural Heritage Management*. In Australia the terms “cultural heritage management” (CHM), and “cultural resource management” (CRM) are synonymous. You will see both terms used in the literature.
- Down Under*. Colloquial name for Australia.
- Dingo*. Australian feral dog, probably introduced from Southeast Asia and/or India between 3,000 and 4,000 years ago. The introduction of the dingo led to the extinction of at least two species of native carnivore from the Australian mainland: *Sarcophilus* (surviving in Tasmania as the Tasmanian Devil) and *Thylacinus* (surviving up until the 1920s in Tasmania as the Tasmanian Tiger). *Thylacinus* is now completely extinct.
- Digbum*. Paid field technician of manual labourer on an archaeological site. Synonym for “shovel bum”
- Dreaming, or Dreamtime*. The creation era when ancestral beings roamed the landscape, creating its features and distributing languages and other cultural practices. The word Dreamtime is not used as much today as it was in the past, as people feel that it tends to trivialize Indigenous belief systems. Also, from a European worldview it connotes a lack of reality (a dream), whereas for Indigenous people it represents an ultimate reality.
- Fire-stick farming*. The regular use of fire to “clean up” country in northern Australia.

Grant period. Dates on which the project activities will begin and end. For granted awards by Australian institutions or foundations, the beginning date usually must be no earlier than July 1 and the end date no later than June 30 of the following year (this is the Australian taxation year).

Holocene. The geological epoch from 10,000 years ago until today. The Holocene and the epoch before it, the Pleistocene, are the two main periods that archaeologists refer to when discussing the Indigenous past in Australia.

In-kind support. The dollar value of materials or services that are provided to a project at no cash cost from sources other than the applicant (i.e. work done by volunteers, donated office supplies). In-kind support must be documented.

Geocentric Datum of Australia (GDA). A datum is any reference system that allows distance to be measured from a fixed point. A geocentric datum uses the Earth's center of mass as the reference point to create a system of measurement that mathematically provides the closest fit to the surface of the globe.

Kinship system. A system of social relationships and behaviors, with rules determined by relationships between kin.

Last Glacial Maximum. Period between about 18–21,000 BP when the last ice age was at its peak. During this time sea levels were lower and the global climate was drier. Desert areas in Australia were at their greatest extent around 18,000 years ago.

"Mud" map. A sketch map or rough sketches of an area which are not usually drawn to scale. Mud maps are made in two main situations:

- To record the route you travelled to a site, so that you or someone else can find the site again; and
- To give a general idea of the shape and context of a site, if you don't have enough time to record it properly, but need to know the basic layout.

Pleistocene. The glacial epoch preceding the Holocene, extending from 10,000 years ago to about 1.8 to 2 million years ago. Together, the Pleistocene and Holocene epochs comprise the Quaternary period.

Reconciliation. The process by which Indigenous and non-Indigenous Australians attempt to acknowledge and redress injustices of the past.

Research design. Synonym for project design.

Sahul. Pleistocene continent formed by the joined landmasses of Australia, Tasmania and New Guinea. Referring to the continental shelf, it is also referred to as Greater Australia.

Site cards. Standard suite of recording forms for archaeological sites. All government heritage departments have their own sets of forms, with their own specific requirements, although all follow a similar pattern (i.e. for Aboriginal sites, there is usually one form for ceremonial sites, one for rock art, one for scarred trees, one for open sites, etc. Historical sites usually only have a single form).

Sunda. Pleistocene continent formed by the joined landmasses of south east Asia.

Appendix 1

Australian Archaeology Yellow Pages¹

Aboriginal Land Councils

NB: Only NSW and the NT have a formal land council system, although there are statutory bodies in South Australia which have a similar function. Other states have local and regional non-statutory bodies that function as land councils or Aboriginal corporations but are not part of a formalised system. Only the major such bodies have been listed here. Other local land councils and Aboriginal Corporations throughout Australia will be listed in the white pages of the telephone directory.

New South Wales:

NSW Aboriginal Land Council
Head Office: 33 Argyle Street,
Parramatta, NSW 2150
PO Box 1125, Parramatta,
NSW 2124
<http://www.alc.org.au/>

The NSW Land Council has regional branches throughout NSW (see <http://www.alc.org.au/about/>

[organisati-on/ RALCS/RALCS.html](http://www.alc.org.au/organisati-on/RALCS/RALCS.html) for a map showing boundaries of Local Aboriginal Land Councils in NSW).

**Branch Offices:*

Central west area Offices:

'Kaituna', Coonamble, NSW 2829
1 Belalie Street, Enngonia,
NSW 2840

Aboriginal Lands Council NSW
ALC Branch

Warren Rd, Gilgandra, NSW 2827

Northern area Offices:

31 Elbow Street, Kempsey, NSW 2440
Far North Coast Branch, 25 Orion
Street, Lismore, NSW 2480
299 Rouse Street, Tenterfield,
NSW 2372

Western area Offices:

'Appin Stn', Menindee, NSW 2879

*For up to date local information, contact either the head office or the relevant regional office for the latest information and recommendations for local contacts, or see

[http:// www.alc.org.au/resources/LALCS/contacts/LALC_Addresses.pdf](http://www.alc.org.au/resources/LALCS/contacts/LALC_Addresses.pdf).

¹ In all cases the street address has been listed first followed by the postal address (usually signified by a Post Office Box or General Post Office Box number). In some cases the street address also serves as the postal address. Australian addresses always end with the 4 digit post code.

Northern Territory:

Northern Land Council (NLC)
[represents Indigenous people in the
northern half of the NT]

Head Office:

9 Rowling Street, Casuarina, NT 0810
PO Box 42921, Casuarina, NT 0810
www.nlc.org.au

*Regional Offices:**Borroloola Office:*

Mara Mara Camp, Robinson Street,
Borroloola, NT 0854
PO Box 453, Borroloola, NT 0854

Darwin/Daly/Wagait Office:

1/17 Georgina Cr, Palmerston,
NT 0830
PO Box 1249, Palmerston, NT 0831

Jabiru (Western Arnhem Land) Office:

3 Govt Bldg Flinders Street, Jabiru,
NT 0886
PO Box 18, Jabiru, NT 0886

Katherine Office:

5 Katherine Tce, Katherine, NT 0850
PO Box 396, Katherine, NT 0851

Ngukurr Office:

Balamurra Street, Ngukurr, NT 0852
PMB 85, Ngukurr, NT 0852

*Nhulunbuy (Eastern Arnhem Land)
Office:*

Endeavour Sq, Nhulunbuy, NT 0880
PO Box 821, Nhulunbuy, NT 0881

Tennant Creek Office:

Shop 4, 172 Paterson Street, Tennant
Creek, NT 0860
PO Box 55, Tennant Creek, NT 0861

Victoria River District Office:

43 Wilson Street, Timber Creek,
NT 0850

Via Katherine, Timber Creek,
NT 0850

Central Land Council (CLC)
[represents Indigenous people in the
southern half of the NT]

Head Office:

31–33 Stuart Hwy, Alice Springs, NT
0870
PO Box 3321, Alice Springs, NT 0871
<http://www.clc.org.au/>

*Regional Offices:**Alice Springs Regional Office:*

71–73 Bath Street, Alice Springs, NT
0870
PO Box 3321, Alice Springs, NT 0871

Mutitjulu (Ayers Rock) Office:

c/- Ininti Store Mutitjulu Community,
Yulara, NT 0872

Kalkaringi Office:

PMB 47, via Katherine, NT 0852

Yuendumu (Southern Tanami) Office:

PMB 107, via Alice Springs,
NT 0872

Papunya (Western) Office:

PMB 123, via Alice Springs, NT 0872

Tennant Creek Office:

63 Paterson Street, Tennant Creek,
NT 0860
PO Box 879, Tennant Creek, NT 0861

Harts Range (Eastern Plenty) Office:

PMB 86, via Alice Springs, NT 0872

Alparra (Eastern Sandover) Office:

PMB 1, via Alice Springs,
NT 0872

Tiwi Land Council [Bathurst and
Melville Islands]

Armidale Street, Stuart Park, NT 0820
PO Box 38545, Winnellie, NT 0821

Queensland:

Cape York Land Council
32 Florence Street, Cairns, Qld 4870
www.cylc.org.au

Carpentaria Land Council Aboriginal
Corporation

Head Office:

Suite 8, 46–50 Spence Street, Cairns,
Qld, 4870

Regional Offices:

Burketown Office:

Musgrave Street, Burketown,
Qld 4830

Doomadgee Office:

Robert Street, Doomadgee Qld 4830

Mt Isa Office:

31–33 Commercial Rd, Mt Isa,
Qld 4825
PO Box 1948, Mt Isa, Qld 4051

Normanton Office:

71 Landsborough Street, Normanton,
Qld 4890

Central Queensland Land Council
250 Ross River Rd, Aitkenvale Qld
4814

Central Queensland Aboriginal Land
Council Inc
Old Coles Bldg, 34 Sydney Street,
Mackay, Qld 4740

Central West Aboriginal Corporation
48 Ash Street, Barcaldine, Qld
4725

North Queensland Land Council
Aboriginal Corporation
61 Anderson Street, Manunda (Cairns),
Qld 4870
PO Box 679N, Cairns, Qld 4870

North Western Queensland Land
Council
91–93 Miles Street, Mt Isa, Qld 4825

Torres Strait Regional Authority
46 Victoria Pde, Thursday Island,
Qld 4875
PO Box 261, Thursday Island,
Qld 4875
www.tsra.gov.au

Western Australia:

Kimberley Land Council Aboriginal
Corporation

Head Office:

Lot 285, Loch Street (cnr Hardman
Street), Derby, WA 6728

Regional Offices:

Broome Office:

36 Pembroke Street, Broome, WA 6725

Kununurra Office:

Speargrass Rd, Kununurra, WA 6743

Halls Creek Office:

Lot 130 Terone Street (cnr Bridge
Street), Halls Creek, WA 6770

Goldfields Land Council Inc
14 Throssell Street, Kalgoorlie, WA
6430

**Archaeological Associations
(Australian)**

AURA (Australian Rock Art Research
Association)

PO Box 216, Caulfield South,
Vict. 3162
<http://mc2.vict.net.net.au/home/aura/web/index.html>

Australasian Society for Historical
Archaeology
Box 220 Holme Building
University of Sydney, NSW
2006
<http://www.asha.org.au/>

Australian Anthropological Society
Inc.
GPO Box 8099 ANU
Canberra, ACT 2601
<http://www.aas.asn.au/>

Australian Archaeological Association
Inc.
Archaeology A14
University of Sydney, NSW 2006
<http://www.australianarchaeologicalassociation.com.au/>

Australian Association of Consulting
Archaeologists Inc.
Box 214 Holme Building
University of Sydney, NSW 2006
<http://www.aacai.com.au/>

Australasian Institute for Maritime
Archaeology Inc
AIMA does not have a standard contact
address but instead relies on the
constantly changing addresses of its
elected officers. You can join online
at:
<http://aima.iinet.net.au/>

Archaeological Associations (International)

International Federation of Rock Art
Organisations (IFRAO)

IFRAO does not have a standard
contact address but instead relies on
the constantly changing addresses of
its elected officers. An Australian Rock
Art Research Association (above)
<http://www.cesmap.it/ifrao/ifrao.html>

International Union for Prehistoric and
Protohistoric Sciences (IUPPS)
c/o Department of Archaeology and
Ancient History of Europe,
Ghent University, Blandijnberg 2 B
9000, Ghent Belgium
<http://www.geocities.com/Athens/Ithaca/7152/>

World Archaeological Congress
(WAC)
c/o International Centre for Cultural
and Heritage Studies
Department of Archaeology
University of Newcastle upon Tyne
Newcastle upon Tyne
NE1 7RU United Kingdom
<http://wordarchaeologicalcongress.org>

Archives (National Archives of Australia)

National Archives of Australia
PO Box 7425, Canberra, BC, ACT
2610
<http://www.naa.gov.au/>
The National Archives of Australia
have reading rooms in all states and
territories:

Australian Capital Territory:
National Archives
Queen Victoria Terrace
Parkes, ACT 2600
PO Box 7425, Canberra, BC
ACT 2610

New South Wales:

National Archives
120 Miller Road
Chester Hill, NSW 2162
Locked Bag 4, Chester Hill, NSW 2162

Northern Territory:

National Archives
Kelsey Crescent, Millber, NT 0810
PO Box 24, Nightcliff, NT 0814

Queensland:

National Archives
16 Corporate Drive, Cannon Hill, QLD
4170
PO Box 552, Cannon Hill, QLD 4170

South Australia:

National Archives
78 Angas Street, Adelaide, SA 5000
PO Box 6536, Halifax Street, SA
5000

Tasmania:

National Archives
85 Macquarie Street, Hobart, Tas.
7000
GPO Box 309, Hobart, Tas. 7001

Victoria:

(Joint reading room with the Public
Records Office of Victoria)
Melbourne Archives Centre
99 Shiel Street, North Melbourne,
Vict. 3051
PO Box 8005, Burwood Heights,
Vict. 3151

Western Australia:

National Archives
384 Berwick Street,
East Victoria Park, WA 6101
PO Box 1144, East Victoria Park, WA
6981

Archives (State)

Australian Capital Territory:

Territorial Archives
PO Box 447, Belconnen ACT 2617

New South Wales:

Archives Office of NSW
2 Globe Street,
The Rocks, Sydney, NSW 2000
PO Box 516, Kingswood, NSW
2747
<http://www.records.nsw.gov.au/>

Northern Territory:

Northern Territory Archives Service
25 Cavenagh Street, Darwin NT 0800
GPO Box 874, Darwin NT 0801
<http://www.nt.gov.au/nta/>

Queensland:

Queensland State Archives
435 Compton Road, Runcorn,
Qld 4113
PO Box 1397, Sunnybank Hills,
Qld 4109
<http://www.archives.qld.gov.au/>

South Australia:

State Records of South Australia
Enfield Plaza, SA 5085
GPO Box 1072, Adelaide, SA 5001
<http://www.archives.sa.gov.au>
City Reading Room
26–28 Leigh Street, Adelaide, SA
5000.

Tasmania:

Archives Office of Tasmania
77 Murray Street, Hobart, Tas. 7000
<http://www.archives.Tas.gov.au/>

Victoria:

Public Record Office Victoria (PROV)
99 Shiel Street, North Melbourne 3051
PO Box 2100

North Melbourne, Vict. 3051
<http://www.prov.vic.gov.au/>

Western Australia:

State Archives
 Alexander Library Building
 Perth Cultural Centre
 James Street, Perth, WA 6000
<http://www.liswa.wa.gov.au/>

Departments of Archaeology

Australian Capital Territory:

Archaeology and Anthropology
 AD Hope Building
 The Australian National University,
 Canberra, ACT 0200
<http://online.anu.edu.au/AandA/>

The Research School of Pacific and
 Asian Studies (RSPAS)
 The Australian National University
 Canberra, ACT 0200
<http://rspas.anu.edu.au>

See also: Humanities Research Centre,
 ANU

Old Canberra House (Building 73),
 Lennox Crossing, ANU, Canberra
 ACT 0200
<http://www.anu.edu.au/HRC/>

New South Wales:

Archaeology Department
 School of Human and Environmental
 Studies,
 University of New England,
 Armidale, NSW 2351
[http://www.une.edu.au/ Arch/
 ArchHome.html](http://www.une.edu.au/Arch/ArchHome.html)

School of Archaeology
 The University of Sydney,
 NSW 2006
[http:// www.arts.usyd.edu.au/
 departs/archaeology](http://www.arts.usyd.edu.au/departs/archaeology)

Department of Ancient History
 Macquarie University
 Building W6A, Sydney, NSW 2109
[http://www.anchist.mq.edu.au/
 about.htm](http://www.anchist.mq.edu.au/about.htm)

Northern Territory:

Charles Darwin University
 There is no Archaeology
 department at CDU, although
 there is an Anthropology
 Department.

Queensland:

School of Anthropology and
 Archaeology
 James Cook University
 Townsville, Qld 4811
<http://www.faess.jcu.edu.au/saas/>

School of Social Science
 Archaeology Department
 University of Queensland
 St Lucia, Qld 4072
[http:// www.ansoc.uq.edu.au/](http://www.ansoc.uq.edu.au/)

South Australia:

Department of Archaeology
 Flinders University
 GPO Box 2100
 Adelaide, SA 5001
[http://www.flinders.edu.au/
 archaeology/](http://www.flinders.edu.au/archaeology/)

Classics, School of Humanities
 University of Adelaide, SA 5005
[http:// www.arts.adelaide.edu.au/
 humanities/classics](http://www.arts.adelaide.edu.au/humanities/classics)

Victoria:

Archaeology Program
 Faculty of Humanities and Social
 Sciences
 La Trobe University, Vict. 3086
[http:// www.latrobe.edu.au/
 archaeology/](http://www.latrobe.edu.au/archaeology/)

The Centre of Classics &
Archaeology
Old Quadrangle
The University of Melbourne
Parkville, Vict. 3010
<http://www.cca.unimelb.edu.au>

Centre for Archaeology and Ancient
History
Bldg. 11 Clayton Campus
Monash University, Vict. 3800
<http://www.arts.monash.edu.au/archaeology>

Centre for Australian Indigenous
Studies (CAIS)
Level 2 Bldg. 55, Clayton, Vict. 3800
PO Box 55, Monash University,
Clayton, Vict. 3800
<http://www.arts.monash.edu.au/cais/>

Western Australia:

Archaeology
The University of Western Australia
Third General Purpose Building
(GP3)
Myers Street, Nedlands, Perth 6009
Archaeology M405
35 Stirling Highway, Crawley,
WA 6009
<http://www.arts.uwa.edu.au/Archaeology/>

Government Bodies (Federal)

General

Australian Taxation Office
GPO Box 9990, in the capital city of
each state and Territory
www.ato.gov.au
To apply for a tax file number, go to:
http://www.ato.gov.au/individuals/pathway.asp?pc=001/002/001/008/002&mf=001&mnu=51#001_002_008_002

Department of Foreign Affairs and
Trade
R.G. Casey Building, John McEwen
Crescent, Barton, ACT 0221
<http://www.dfat.gov.au/geo/australia/>

*Bi-lateral council bodies (please note
that only the Australian addresses for
these bodies are listed below. Each will
also have a contact in their home
country):*

Australia-China Council
Locked Bag 40, Kingston, ACT 260
<http://www.dfat.gov.au/acc/>

Australia-India Council
PO Box E8, Kingston, ACT 2604
<http://www.dfat.gov.au/aic/>

Australia-Indonesia Institute
PO Box 5369, Kingston, ACT 2604
<http://www.dfat.gov.au/aii/>

Australia-Japan Foundation
PO Box 6040, Kingston, ACT 2604
<http://www.ajf.australia.or.jp/english/aboutajf/>

Australia-Korea Foundation
<http://www.dfat.gov.au/akf/index.html>

Australia-Thailand Institute
South and South East Asia Division,
Department of Foreign Affairs and
Trade,
RG Casey Building, John McEwen
Crescent, Barton, ACT 0221
<http://www.dfat.gov.au/at/>

Australia-Malaysia Institute
South and South East Asia Division,
Department of Foreign Affairs and
Trade,
RG Casey Building, John McEwen

Crescent, Barton, ACT 0221
<http://www.dfat.gov.au/ami/>

Department of Health and Ageing
 Alexander Building, Furzer Street,
 Woden Town Centre, ACT 2606
 GPO Box 9848, Canberra, ACT 2601
www.health.gov.au

Department of Immigration and
 Multicultural and Indigenous Affairs
 6 Chan Street, Belconnen, ACT 2617
 PO Box 25, Belconnen, ACT
 2616
www.immi.gov.au/

See
<http://www.immi.gov.au/contacts/overseas.htm> for contact details of
 offices outside Australia.

National Health and Medical Research
 Council
 Fishburn House, Furzer Street, Woden
 ACT 2606
 NHMRC Secretariat (MDP 100)
 GPO Box 9848, Canberra, ACT 2601
<http://www7.health.gov.au/nhmrc/>

Historic and Indigenous Heritage

Australian Heritage Council
 John Gorton Building
 King Edward Terrace, Parkes,
 ACT 2600
 GPO Box 787, Canberra, ACT 2601
<http://www.ahc.gov.au/>

Commonwealth Historic Shipwrecks
 Officer
 Department of the Environment and
 Heritage
 GPO Box 787, Canberra, ACT 2601

Department of the Environment and
 Heritage
 (Including the Heritage Division and

its various branches)
 John Gorton Building,
 King Edward Terrace, Parkes,
 ACT 2600
 GPO Box 787, Canberra, ACT 2601
<http://www.deh.gov.au/index.html>

Office of Indigenous Policy
 Coordination (OIPC)
 Lovett Tower, Keltie Street, Woden,
 ACT 2606
 PO Box 17, Woden, ACT 2606
<http://www.oipc.gov.au>

Government Bodies (State)

General

NSW Department of Primary
 Industries
 161 Kite Street, Orange, NSW 2800
 Locked Bag 21, Orange, NSW 2800
<http://www.dpi.nsw.gov.au/minerals>

Historic and Indigenous Heritage Australian Capital Territory:

ACT Heritage Council
 PO Box 144, Lyneham, ACT 2602
<http://www.environment.act.gov.au/heritage/heritagecouncil.html>

Heritage Unit
 Arts, Heritage and Environment
 Macarthur House Level 2,
 12 Wattle Street, Lyneham,
 ACT 2602
 PO Box 144, Lyneham, ACT 2602
<http://www.environment.act.gov.au/heritage/actheritage>

New South Wales:

Cultural Heritage Division
 Department of Environment &
 Conservation
 43 Bridge Street, Hurstville,
 NSW 2220

PO Box 1967, Hurstville, NSW 1481
<http://www.nationalparks.nsw.gov.au>

NSW Heritage Office
3 Marist Place, Parramatta, NSW 2150
Locked Bag 5020, Parramatta,
NSW 2150
<http://www.heritage.nsw.gov.au/>

Heritage Council of NSW
3 Marist Place, Parramatta, NSW 2150
Locked Bag 5020, Parramatta,
NSW 2150

Northern Territory:

Aboriginal Areas Protection Authority
NT

Head Office:

1st Floor T.I.I. Building
74 Cavenagh Street, Darwin,
NT 0800
GPO Box 1890, Darwin NT 0801
<http://www.nt.gov.au/aapa>

Regional Office:

Ground Floor Belvedere House
Cnr. Bath & Parsons Streets
Alice Springs, NT 0870
PO Box 3656, Alice Springs, NT
0871
<http://www.nt.gov.au/aapa>

Heritage Conservation Services

Head Office:

Department of Natural Resources
Environment & the Arts NT
2nd Floor Darwin Plaza
41 Smith Street, Mall, Darwin, NT
0800
PO Box 496, Palmerston, NT 0831
[http://www.nt.gov.au/nreta/heritage/
contactus/index.html](http://www.nt.gov.au/nreta/heritage/contactus/index.html)

Regional Office:

Alice Springs Regional Office,

1st Floor Alice Plaza
GPO Box 1120, Alice Springs,
NT 0871

Parks and Wildlife Service Northern
Territory
Goyder Centre, 25 Chung Wah
Terrace, Palmerston, NT 0830
PO Box 496, Palmerston, NT 0831
<http://www.nt.gov.au/nreta/parks//>

Northern Territory Heritage Advisory
Council
Contact via Heritage Conservation
Services
Department of Natural Resources
Environment & the Arts NT
[http://www.nt.gov.au/nreta/heritage/
managing/hac/](http://www.nt.gov.au/nreta/heritage/managing/hac/)

Queensland:

Cultural Heritage Coordination Unit
Department of Natural Resources and
Mines
Level 13, Mineral House,
41 George Street, Brisbane,
Qld 4000
GPO Box 2454, Brisbane, Qld 4001
[http://www.nrm.qld.gov.au/cultural-
heritage/index.html](http://www.nrm.qld.gov.au/cultural-heritage/index.html)

Cultural Heritage Unit

Environmental Protection Agency
Head Office: 160 Ann Street, Brisbane,
Qld 4000
PO Box 15155, City East, Brisbane,
Qld 4002
<http://www.epa.qld.gov.au/>

Regional Offices:

Rockhampton:

61 Yeppoon Road, North
Rockhampton, Qld 4701

Townsville:

Marlow St
Townsville, Qld 4810

Cairns:

5b Sheridan St, Cairns, Qld 4870

Queensland Parks and Wildlife Service
Southern Region

Level 7, 160 Ann Street, Brisbane, Qld
4000

PO Box 15155, City East, Qld 4002

Central Regional Centre

61 Yeppoon Road, North

Rockhampton, Qld 4701

PO Box 3130

Rockhampton Shopping Fair,

Rockhampton, Qld 4701

Northern Regional Centre

Level 1, 5B Sheridan Street, Cairns,
Qld 4870

PO Box 2066, Cairns, Qld 4870

South Australia:

Department of Aboriginal Affairs and
Reconciliation (DAARE)

Level 13 State Administration Centre
200 Victoria Square, Adelaide SA
5000

<http://www.daare.sa.gov.au/>

Development Assessment Commission
SA

136 North Terrace, Adelaide SA
5000

<http://www.planning.sa.gov.au/dac>

Heritage Branch

Department of Environment and
Heritage

Ground Floor, 1 Richmond Rd
Keswick, SA 5035

GPO Box 1047, Adelaide, SA 5001

<http://www.environment.sa.gov.au/heritage/contact.html>

*For permits to work within a South
Australian National Park,*

Conservation Park or Wildlife Park:

Manager Research Permits

Biodiversity Survey and Monitoring

Science and Conservation Branch

Department for Environment and

Heritage 1 Richmond Rd, Keswick,
SA 5035

GPO Box 1047, Adelaide,

SA 5001

Tasmania:

Heritage Tasmania

Department of Tourism, Parks,
Heritage & the Arts

Level 6, 134 Macquarie Street,
Hobart, Tas. 7001

GPO Box 1751, Hobart, Tas, 7001

<http://www.heritage.tas.gov.au/>

Aboriginal Heritage Office

Department of Tourism, Parks,
Heritage & the Arts

22 Elizabeth Street, Hobart,
Tas. 7001

Tasmanian Heritage Council

Level 6, 134 Macquarie Street,
Hobart, Tas. 7001

GPO Box 618, Hobart, Tas. 7001

Parks and Wildlife Service, Tasmania

134 Macquarie Street, Hobart,
Tas. 7000

GPO Box 1751, Hobart, Tas. 7001

<http://www.parks.tas.gov.au/>

Victoria:

Aboriginal Affairs Victoria

Department for Victorian
Communities

1 Spring Street, Melbourne,
Vict. 3000

GPO Box 2392V, Melbourne,

Vict. 3001
<http://www1.dvc.vic.gov.au/aav/>

Parks Victoria
Department of Sustainability and
Environment
Head Office:
Level 10/535 Bourke Street,
Melbourne, Vict. 3000
<http://www.parkweb.vic.gov.au/>

Heritage Victoria
Level 7, 8 Nicholson Street,
East Melbourne, Vict. 3002
GPO Box 2797Y, Melbourne, Vict.
3001
<http://www.heritage.vic.gov.au/>

Heritage Council of Victoria
Can be contacted via Heritage
Victoria

Western Australia:
Department of Indigenous Affairs
Level 1 197 St Georges Tce, Perth, WA
6805
GPO Box 7770,
Cloisters Square, Perth, WA 6850
<http://www.dia.wa.gov.au/>

Heritage Council of Western Australia
108 Adelaide Tce, East Perth, WA
6004
<http://www.heritage.wa.gov.au>

State Shipwreck Contacts

**Note: This is only a listing of each
contact. Details of each institution
are included in their separate
sections.**

New South Wales:
1. NSW Heritage Office
2. (Norfolk Island)

Norfolk Island Museum
Kingston, Norfolk Island 2899
South Pacific

Northern Territory:
Museum and Art Gallery of the
Northern Territory

Queensland:
Museum of Tropical Queensland

South Australia:
Heritage Branch, South Australia

Tasmania:
Heritage Tasmania

Victoria:
Heritage Victoria

Western Australia:
Western Australian Maritime Museum

Other State Government bodies

Port Arthur Historic Site Management
Authority
Port Arthur Historic Site
Arthur Highway, Port Arthur,
Tasmania 7182
<http://www.portarthur.org.au/>

Sydney Harbour Foreshore Authority
Level 6, 66 Harrington Street, The
Rocks, NSW 2000
PO Box N408, Grosvenor Place,
Sydney, NSW 1220
<http://www.shfa.nsw.gov.au/>

Government bodies (municipal)

City of Adelaide Archives
Topham Mall, off 56 Waymouth Street,
Adelaide, SA 5000
GPO Box 2252, Adelaide, SA 5001
[http://www.adelai-decitycouncil.com/](http://www.adelai-decitycouncil.com/archives)
archives

City of Sydney Archives
 456 Kent Street, Sydney, NSW 2000
 GPO Box 1591, Sydney, NSW 2001
<http://www.cityofsydney.nsw.gov.au/AboutSydney/HistoryAndArchives/Archives/>

Libraries (National)

National Library of Australia
 Parkes Place, Canberra, ACT 2600
 Catalog online at:
<http://www.nla.gov.au/catalogue/>

Libraries (State)

New South Wales:

State Library of New South Wales
 (including the Mitchell Library)
 Macquarie Street, Sydney, NSW 2000
 Catalogue online at:
<http://www.sl.nsw.gov.au/webcat/about.cfm>

Northern Territory:

Northern Territory Library Service
 Parliament House
 cnr Bennett & Mitchell Streets,
 Darwin, NT 0800
 GPO Box 42, Darwin, NT 0801
 Catalog online at:
<http://jimjim.ntlib.nt.gov.au/cgi-bin/chameleon>

Queensland:

State Library of Queensland (including the John Oxley Library)
 William Street, Brisbane, Qld 4000
 PO Box 3488, South Brisbane, Qld 4101
 Catalog online at:
<http://www.slq.qld.gov.au/cat/index.htm>

South Australia:

State Library of South Australia
 (including the Mortlock Library and

Australiana collections)
 Corner North Terrace and Kintore Avenue,
 Adelaide, SA 5000
 GPO Box 419, Adelaide, SA 5001
 Catalog online at:
<http://www.slsa.sa.gov.au/>

Tasmania:

State Library of Tasmania (including the Tasmanian and Special Collections Library)
 91 Murray Street, Hobart, Tas. 7000
 Catalog online at:
<http://www.talis.Tas.gov.au:8000/>

Victoria:

State Library of Victoria (including the La Trobe Library)
 304–328 Swanston Street,
 Melbourne, Vict. 3000
 Catalog online at:
<http://catalogue.slv.vic.gov.au/>

Western Australia:

State Library of Western Australia
 (including the Batty Library of Western Australian history)
 Alexander Library Building
 Perth Cultural Centre,
 James Street, Perth, WA 6000
 Catalog online at:
<http://henrietta.lis.wa.gov.au/>

Museums (National)

Australian Aviation Museum
 Bankstown Airport
 Starkie Rd, Milperra, NSW 2214
 PO Box 420, Panania, NSW 2213

Australian National Maritime Museum
 2 Murray Street, Darling Harbour,
 Sydney

GPO Box 5131, Sydney, NSW 2001
<http://www.anmm.gov.au/>

Australian War Memorial
Treloar Crescent, Campbell,
ACT 2601

GPO Box 345, Canberra, ACT 2601
<http://www.awm.gov.au>

National Museum of Australia
Lawson Crescent, Acton Peninsula,
ACT 2601

GPO Box 1901, Canberra, ACT 2601
<http://www.nma.gov.au>

National Motor Museum
Shannon Street, Birdwood, SA 5234
This facility is part of the History Trust
of South Australia

Museums (State)

New South Wales:

Australian Museum
6 College Street, Sydney, NSW 2010
PO Box A285, Sydney South, NSW
2000
<http://www.amoline.net.au>

Justice and Police Museum
Cnr Albert and Phillip Streets,
Circular Quay, Sydney, NSW 2000
This facility is part of the Historic
Houses Trust of New South Wales:
<http://www.hht.nsw.gov.au/museums>

Museum of Sydney
Cnr Phillip & Bridge Streets, Sydney,
NSW 2000
[http://www.hht.net.au/museums/
museum_of_sydney/museum_of_sydney](http://www.hht.net.au/museums/museum_of_sydney/museum_of_sydney)

Northern Territory:

Museum and Art Gallery of the
Northern Territory

Conacher Street, Fannie Bay, Darwin,
NT 0801

PO Box 4646, Darwin, NT 0801
[http://www.nt.gov.au/nreta/museums/
magnt/magnt.html](http://www.nt.gov.au/nreta/museums/magnt/magnt.html)

Queensland:

Queensland Museum
Inquiry Centre, Level 3 Queensland
Cultural Centre, South Bank, Brisbane,
Qld 4101

PO Box 3300, South Bank, Brisbane,
Qld 4101
<http://www.qmuseum.qld.gov.au/>

Museum of Tropical Queensland
70–102 Flinders Street, Townsville,
Qld 4810
<http://www.mtq.qld.gov.au/>

Museum of Lands, Mapping and
Surveying
Department of Natural Resources and
Mines
Cnr Main and Vulture Streets,
Woolloongabba, Qld 4102
PO Box 1401, Brisbane, Qld 4000
[http://www.nrm.qld.gov.au/
cultural_heritage/resources/
nrme_museum.html](http://www.nrm.qld.gov.au/cultural_heritage/resources/nrme_museum.html)

South Australia:

Migration Museum
82 Kintore Ave, Adelaide, SA
5000
[http://www.history.sa.gov.au/
migration/visiting.htm](http://www.history.sa.gov.au/migration/visiting.htm)
This facility is part of the History Trust
of South Australia

The South Australian Museum
North Terrace, Adelaide, SA 5000
GPO Box 234, Adelaide, SA 5001
<http://www.samuseum.sa.gov.au>
South Australian Maritime Museum

Lipson Street, Port Adelaide, SA 5015
http://www.history.sa.gov.au/maritime/about_samm.htm

This facility is part of the History Trust of South Australia

Tasmania:

Tasmanian Museum and Art Gallery
 40 Macquarie Street, Hobart, Tas. 7000
 GPO Box 1164, Hobart, Tas. 7001
<http://www.tmag.tas.gov.au>

Victoria:

Museum Victoria
 Melbourne Museum
 11 Nicholson Street, Carlton, Vict.
 3053
 GPO Box 666, Melbourne,
 Vict. 3001
<http://www.museum.vic.gov.au>

Western Australia:

Western Australia Maritime Museum
 Victoria Quay, Fremantle, WA 6160
<http://www.museums.wa.gov.au/maritime>

Western Australian Museum (Perth)
 Perth Cultural Centre
 James Street, Perth, WA 6000
<http://www.museum.wa.gov.au/>

Organizations (Government)

Australia Council for the Arts
 372 Elizabeth Street, Surrey Hills,
 NSW 2010
 PO Box 788, Strawberry Hills,
 NSW 2012
<http://www.ozco.gov.au/>

AIATSIS (Australian Institute of
 Aboriginal and Torres Strait
 Islander Studies)
 Acton Peninsula Lawson Cres,
 Acton, ACT 2601

GPO Box 553, Canberra, ACT 2601
<http://www.aiatsis.gov.au/>

AINSE (Australian Institute of Nuclear
 Science and Engineering)
 New Illawarra Road, Lucas Heights,
 NSW 2234
 PMB 1 Menai, NSW 2234
<http://www.ansto.gov.au/ainse/>

ANSTO (Australian Nuclear Science
 and Technology Organisation)
 New Illawarra Rd, Lucas Heights,
 NSW 2234
 PMB 1, Menai, NSW 2234
<http://www.ansto.gov.au/>

Australian Research Council
 1st Floor 8 Brindabella Crt.
 Brindabella Business Park, Canberra,
 Airport
 GPO Box 2702, Canberra, ACT 2601
<http://www.arc.gov.au/>

Organizations (Non-Government)

General

Australian Academy of the Humanities
 Liversidge Street, Canberra, ACT 2601
 GPO Box 93, Canberra, ACT 2601
<http://www.humanities.org.au/>

Australian Red Cross
<http://www.redcross.org.au/default.asp>

IDP Education Australia Ltd
 1 Geils Court, Deakin, ACT 2600
<http://www.idp.com>

Japan Foundation, Sydney
 Shop 23, Level 1 Chifley Plaza,
 2 Chifley Square, Sydney, NSW 2000
<http://www.jpff.org.au/>

Oral History Association of Australia
 The OHA does not have a standard
 contact address but instead relies on

the constantly changing addresses of its elected officers. You can find current information online at: <http://www.ohaa.net.au/>

Project AWARE Foundation (Asia Pacific)
Unit 3, 4 Skyline Place, Frenchs Forest, Sydney, NSW 2086
<http://www.projectaware.org/asiapac/english/grants/>

Conservation Services

The Australian Institute for the Conservation of Cultural Material Inc. (AICCM)
GPO Box 1638, Canberra, ACT 2601
<http://www.aiccm.org.au/>

Artlab Australia
70 Kintore Ave, Adelaide, SA 5000
<http://www.artlab.sa.gov.au/>

National Trust of Australia

The Australian Council of National Trusts
14/71 Constitution Ave, Campbell, ACT 2612
PO Box 1002, Civic Square, ACT 2608
<http://www.nationaltrust.org.au/>

Australian Capital Territory:

National Trust of Australia (Australian Capital Territory)
1st Floor, North Building Civic Offices, Civic Square, Canberra, ACT 2608
PO Box 1144, Civic Square, ACT 2608
www.act.nationaltrust.org.au

New South Wales:

National Trust of Australia (New South Wales)
Observatory Hill

The Rocks, Sydney, NSW 2000
GPO Box 518, Sydney, NSW 2001
<http://www.nsw.nationaltrust.org.au/>

Northern Territory:

National Trust of Australia (N.T.)
2 Kahlin Ave, Darwin, NT 0800
GPO Box 3520, Darwin, NT 0801
<http://members.iinet.net.au/~ntnt/>

Queensland:

National Trust of Queensland
91–95 William Street, Brisbane, Qld 4001
GPO Box 538, Brisbane, Qld 4001
<http://www.nationaltrustqld.org/>

South Australia:

National Trust of South Australia
2/27 Leigh Street, Adelaide, SA 5000
PO Box 8147,
Station Arcade, Hindley Street,
Adelaide, SA 5000
<http://www.sa.nationaltrust.org.au/>

Tasmania:

National Trust of Australia (Tasmania)
Franklin House
413 Hobart Road, Launceston, Tas. 7249
PO Box 711, Launceston, Tas. 7250

Victoria:

National Trust of Australia (Victoria)
4 Parliament Place, East Melbourne, Vict. 3002
<http://www.nattrust.com.au/>

Western Australia:

National Trust of Australia (Western Australia)
4 Havelock Street, West Perth, WA, 6005
PO Box 1162, West Perth, WA 6872
<http://www.ntwa.com.au/>

Non-statutory Heritage Bodies

Historic Houses Trust (includes the Justice and Police Museum and the Museum of Sydney)

Head Office: The Mint, 10 Macquarie Street, Sydney, NSW 2000.
<http://www.hht.net.au/>

History Trust of South Australia (includes the South Australia Maritime Museum and the Migration Museum)
GPO Box 1836, Adelaide, SA 5001
<http://www.history.sa.gov.au/>

Australian ICOMOS Secretariat
Australia ICOMOS does not have a standard contact address but instead relies on the constantly changing addresses of its elected officers. You can find current information online at:
<http://www.icomos.org/australia/>

Philanthropic Foundations

Australian Multicultural Foundation
PO Box 538, Carlton South, Vict. 3053
www.amf.net.au

The Christensen Fund
394 University Avenue
Palo Alto, CA 94301, USA
www.christensenfund.org

George Alexander Foundation
Level 3, 111 Collins St, Melbourne, Vict. 3000
www.gafoundation.org.au

Ian Potter Foundation
Level 3, 111 Collins Street,
Melbourne, Vict. 3000
<http://www.ianpotter.org.au/>

LUMBU Indigenous Community Foundation
Level 5, 165 Flinders Lane,
Melbourne, Vict. 3000
www.lumbu.org/

Macquarie Foundation
Macquarie Bank Limited
1 Martin Street, Sydney,
NSW 2000
www.macquarie.com.au

Mazda Foundation
PO Box 183, South Melbourne,
Vict. 3205
www.mazdafoundation.org.au

Myer Foundation
Level 18, 8 Exhibition Street,
Melbourne, Vict. 3000
<http://www.myerfoundation.org.au>

Perpetual Trustees
GPO Box 4172, Sydney NSW 2001
www.perpetual.com.au

Philanthropy Australia
PO Box W99, Warringah Mall
Brookvale, NSW 2100
www.philanthropy.org.au

Sylvia and Charles Veirtel Charitable Foundation
ANZ Charitable Trusts,
ANZ Executors and Trustee Company Limited,
PO Box 389D, Melbourne, Vict. 3000
www.anz.charitabletrusts/guidelines.htm

Wenner–Gren Foundation for Anthropological Research
470 Park Avenue South, 8th Floor
New York, NY, 10016, USA
www.wennergren.org/

Appendix 2

Codes of Ethics

Code of Ethics of the Australian Archaeological Association Inc.

1. Foreword

1.1 Members will serve the interests of the Association by adhering to its objects and purposes as defined by this Code of Ethics and the *Constitution*, specifically:

- To promote the advancement of archaeology.
- To provide an organisation for the discussion and dissemination of archaeological information and ideas in archaeology.
- To convene meetings at regular intervals.
- To publicise the need for the study and conservation of archaeological sites and collections; and
- To publicise the work of the Association.

1.2 Members will negotiate and make every reasonable effort to obtain the informed consent of representatives of the communities of concern whose cultural heritage is the subject of investigation. Members cannot assume that there is no community of concern.

1.3 Members recognise that there are many interests in cultural heritage, but they specifically acknowledge the rights and interests of Indigenous peoples. AAA endorses and directs members to the current guidelines for ethical research with Indigenous parties published by the Australian Institute of Aboriginal and Torres Strait Islander Studies (www.aiatsis.gov.au/corp/docs/EthicsGuideA4.pdf).

1.4 Members whose actions are detrimental to the interests of the Association may be subject to disciplinary procedures as defined by the *Constitution*.

2. Principles Relating to the Archaeological Record

2.1 Consonant with their obligations arising from government and international agreements, legislation and regulations, members will advocate the conservation, curation and preservation of archaeological sites, assemblages, collections and archival records.

- 2.2 Members will endeavour to ensure that archaeological sites and materials which they investigate are managed in a manner which conserves the archaeological and cultural heritage values of the sites and materials.
- 2.3 Members will neither engage in nor support the illicit trade in cultural heritage.
- 2.4 Members recognise the importance of repatriation of archaeological materials for both Indigenous and non-Indigenous communities of concern and they support and advocate the necessity to properly manage archaeological materials in accordance with agreements with communities of concern.
3. Principles Relating to Indigenous Archaeology
 - 3.1 Members acknowledge the importance of cultural heritage to Indigenous communities.
 - 3.2 Members acknowledge the special importance to Indigenous peoples of ancestral remains and objects and sites associated with such remains. Members will treat such remains with respect.
 - 3.3 Members acknowledge Indigenous approaches to the interpretation of cultural heritage and to its conservation.
 - 3.4 Members will negotiate equitable agreements between archaeologists and the Indigenous communities whose cultural heritage is being investigated. AAA endorses and directs members to the current guidelines regarding such agreements published by the Australian Institute of Aboriginal and Torres Strait Islander Studies (www.aiatsis.gov.au/corp/docs/EthicsGuideA4.pdf).
 - 3.5 Members recognise the Indigenous property rights of Indigenous peoples.
4. Principles Relating to Conduct
 - 4.1 Members will treat each other in a professional manner.
 - 4.2 Members will disseminate the results of their work as widely as possible using plain language where appropriate.
 - 4.3 Any person can notify the Executive Committee of a member's conduct which they believe to be detrimental to the interests of the Association. Complaints may activate procedures outlined in *Section 32 (Expulsion of Members) of the Constitution*, including rights of appeal.
 - 4.4 Personal information provided to the Association by members will be kept confidential.

Last Amended: 14 December 2004.

Australian Association of Consulting Archaeologists Inc. Code of Ethics

Schedule 2 of the AACAI *Constitution*

1. Foreword

- 1.1 Members agree that as archaeologists we have certain responsibilities to the public, our employers and clients and our colleagues, and undertake to abide by the Code of Ethics as set out below to the best of our ability.

2. Duty to the Public

- 2.1 A member should take a responsible attitude to the archaeological resource base and to the best of her/his understanding ensure that this, as well as information derived from it, are used wisely and in the best interest of the public.
- 2.2 A member shall not recommend or take part in any research which she/he is not qualified.
- 2.3 A member shall not recommend or take part in any research which she/he has good reason to believe may be sub-standard.
- 2.4 A member shall ensure that all relevant data pertaining to the resource base should be deposited with an appropriate government authority or archive.

3. Duty to Certain Groups

- 3.1 A member shall be sensitive to, and respect the legitimate concerns of groups whose cultural background is the subject of investigations.

4. Duty to Informants

- 4.1 A member shall offer appropriate remuneration for time, expertise, personal cost and inconvenience incurred in the giving of information, sought by a member of the association.

5. Duty to the Profession

- 5.1 A member shall keep informed about developments in her/his field of expertise and be willing to share such knowledge to improve the general standard of archaeological work.
- 5.2 A member shall avoid discrediting the profession by knowingly undertaking work beyond her/his competence.
- 5.3 A member shall respect the professional interests of colleagues as far as is ethical in terms of the interests of the public and the discipline.
- 5.4 Where a member has been asked for a second opinion, she/he shall advise the first archaeologist that she/he has been so requested.
- 5.5 A member shall not refuse a reasonable request from a qualified colleague for research data and shall endeavour to pass on relevant information to interested colleagues and appropriate official bodies.
- 5.6 The consultant should not knowingly compete with another for employment to the detriment of professional standards.
- 5.7 A member must state clearly the evidence on which the report is based, to what extent it is a matter of personal observation and the qualifications and experience of any co-workers quoted.
- 5.8 A member shall plan and complete any work as carefully and competently as possible under the circumstances and remembering that the information gained matters in terms of the discipline of archaeology as well as the problems of the employer or client.

6. Duty to Employer or Client

- 6.1 A member shall report on work accurately, promptly and in the manner that best serves the public, the employer or client.

7. Matters of Fact

7.1 The consultant's findings, recommendations, etc., shall be based upon professional knowledge and opinion and should avoid exaggerated and ill-founded statements.

8. Matters of Opinion

8.1 A member shall not knowingly misrepresent the needs, problems or possible consequences of a project.

8.2 A member shall not attempt to discredit the competence or integrity of a colleague unless she/he considers it is professional or public duty to do so.

9. Limitation

9.1 A member shall advise the employer or client to engage other expert consultants for aspects of a project beyond her/his own competence. No concealed fee shall be accepted for such referrals.

10. Training of Potential Archaeologists

10.1 A member shall give less qualified co-workers on a project every reasonable opportunity to gain skills and experience and shall negotiate adequate and appropriate remuneration for such work with regard to the skills of the co-worker and requirements of the job.

11. Credit to Colleagues

11.1 A member shall give due credit for work done by others (including subordinates) as consultants and/or researchers, and acknowledge ideas and methods originating from other persons unless such contributions have become generally known.

12. Acceptance of Favours

12.1 A member shall avoid placing her/himself under any obligation to any person or organisation if doing so could affect her/his impartiality in professional matters.

13. Confidential Information

13.1 A member shall not use confidential non-archaeological information acquired during work for an employer or client without due permission from that employer or client.

13.2 A member shall respect such information and ensure that co-workers do the same.

13.3 A member shall not disclose such information unless the law so requires.

14. Consulting Practice

14.1 A member shall not be described as or claim to be an archaeological consultant unless she/he can act as an independent and unbiased adviser and has suitable qualifications and experience.

15. Legal Requirements

15.1 A member shall take care to know of and comply with all relevant legal requirements.

15.2 A member shall refuse any request from an employer or client or any other persons, which involves illegal or unethical behaviour, such as suppression or misrepresentation of information.

- 15.3 A member shall not engage in any illegal or unethical conduct involving archaeological matters.
- 16. Preference of Employment
 - 16.1 On any job where a qualified archaeological assistant is necessary or required, a qualified archaeologist who is a member of this Association should be given preference of employment.
- 17. Duty to Employees
 - 17.1 The recommended fee scales of employees shall be regarded as a minimum and shall not be undercut.

Australian Association of Consulting Archaeologists Inc.

Consulting with Aboriginal Communities Policy Document

1. The Association recognises that Aboriginal sites are of significance to Aboriginal people as part of their heritage and as part of their continuing culture and identity.
2. The Association recognises that Aboriginal communities should be involved in decision-making concerning Aboriginal sites. Aboriginal opinions, concerns and management recommendations should be presented alongside those of the archaeological consultant.
3. The Association recognises that Aboriginal people have a right to be consulted about the intention to undertake archaeological work, to be consulted about the progress and findings of this work, and to be consulted about any recommendations arising from this work.
4. The Association supports the practice of directly involving Aboriginal people in archaeological work, particularly fieldwork.
5. The Association recognises that work undertaken by Aboriginal people on behalf of a member of the Association must be subject to appropriate remuneration in accordance with the Association's recommended scale of fees, or, where appropriate, subject to remuneration above the Association's fee scale where this has been derived from negotiations between the Member and the Aboriginal community.
6. The Association recognises that the circulation or publication of the results of archaeological work must be sensitive to Aboriginal concerns about the disclosure of confidential information about sites.
7. The Association recognises that assistance provided by Aboriginal people and communities should be acknowledged in subsequent written and verbal reports, publications and presentations.
8. The Association recognises that information and documentation derived from archaeological work should be returned to relevant Aboriginal people and their communities.
9. The Association recognises that consultation with Aboriginal communities should be via land councils, co-operatives or other organisations that are generally recognised as legitimately representing the interests and views of Aboriginal people in the relevant locality, area or region.

Australian Institute for Maritime Archaeology Code of Ethics

Definition. A Maritime Archaeologist is a person who:

- holds an Honours or other post-graduate degree in Maritime Archaeology or in another area of Archaeology with a major in Maritime Archaeology; or
- has gained Australian State or Commonwealth recognition as a maritime archaeologist plus a minimum of two and a half years of full time professional experience applying the theories, methods and practices of Maritime Archaeology to the identification, evaluation, documentation or treatment of maritime archaeological sites in Australia and its Territories (one year experience in maritime archaeology must be under supervision of a maritime archaeologist); and can demonstrate the successful application of acquired proficiencies to the practice of maritime archaeology.

1. The Archaeologist's Responsibility to the Public

1.1 An archaeologist shall:

- (a) Recognise a commitment to represent archaeology and its research results to the public in a responsible manner;
- (b) Actively support conservation of the archaeological resource base;
- (c) Be sensitive to, and respect the legitimate concerns of, groups whose cultural histories are the subjects of archaeological investigations;
- (d) Avoid and discourage exaggerated, misleading, or unwarranted statements about archaeological matters that might induce others to engage in unethical or illegal activity;
- (e) Support and comply with the terms of the ICOMOS Burra Charter.

1.2 An archaeologist shall not:

- (a) Engage in any illegal or unethical conduct involving archaeological matters or knowingly permit the use of her/his name in support of any illegal or unethical activity involving archaeological matters;
- (b) Give a professional opinion, make a public report, or give legal testimony involving archaeological matters without being as thoroughly informed as might reasonably be expected;
- (c) Engage in conduct involving dishonesty, fraud, deceit or misrepresentation about archaeological matters;
- (d) Undertake any research that affects the resource base for which he/she is not qualified.

2. The Archaeologist's Responsibility to her/his Colleagues

2.1 An archaeologist shall:

- (a) Give appropriate credit for work done by others;
- (b) Stay informed and knowledgeable about developments in her/his field or fields or specialisation;
- (c) Encourage less qualified or experienced co-workers to develop skills and experience through participation in archaeological projects;
- (d) Communicate and co-operate with colleagues having common professional interests;

- (e) Give due respect to colleagues interests in, and right to, information about sites, areas, collections, or date where there is a mutual active or potentially active research concern;
- (f) Know and comply with all laws applicable to her/his archaeological research, as well as with any relevant procedures promulgated by duly constituted professional organisations;
- (g) Report knowledge of violations of this Code to AIMA and other appropriate authorities.

2.2 An archaeologist shall not:

- (a) Falsely or maliciously attempt to injure the reputation of another archaeologist;
- (b) Commit plagiarism in oral or written communication;
- (c) Undertake research that affects the archaeological resource base unless reasonably prompt, appropriate analysis and reporting can be expected;
- (d) Refuse a reasonable request from a qualified colleague for research data.

3. The Archaeologist's Responsibility to Employers and Clients

3.1 An archaeologist shall:

- (a) Respect the interest of her/his employer or client, so far as is consistent with the public welfare and this Code of Ethics;
- (b) Refuse to comply with any requests or demands of an employer or client which conflict with this Code of Ethics;
- (c) Recommend to employers or clients the employment of other archaeologists or other expert consultants upon encountering archaeological problems beyond her/his own competence;
- (d) Exercise reasonable care to prevent her/his employees, colleagues, associates and others whose services are utilised by her/him from revealing or using confidential information. Confidential information means information of a non-archaeological nature gained in the course of employment which the employer or client has requested be held inviolate, or the disclosure of which would be embarrassing or would likely to be detrimental to the employer or client. Information ceases to be confidential when the employer or client so indicates or when such information becomes publicly known.

3.2 An archaeologist shall not:

- (a) Reveal confidential information, unless required by law;
- (b) Use confidential information for the advantage of herself/himself or a third person, unless the client consents to full disclosure;
- (c) Accept compensation or anything of value for recommending the employment of another archaeologist or other person, unless such compensation or thing of value is fully disclosed to the potential employer or client;
- (d) Recommend or participator in any research which does not comply with the requirements of the Standard of Research Performance.

Standard or Research Performance Preamble

The research archaeologist has a responsibility to attempt to design and conduct projects that will add to our understanding of past cultures and/or that will develop better theories, methods, or techniques for interpreting the archaeological record, while causing minimal attrition of the archaeological resource base. In the conduct of a research project, the following minimum standards should be followed:

1. The archaeologist has a responsibility to prepare adequately for any research project whether or not in the field. The archaeologist must:
 - 1.1 Assess the adequacy of her/his qualifications for the demands of the project, and minimise inadequacies by acquiring additional expertise, by bringing in associates with the needed qualifications, or by modifying the scope of the project;
 - 1.2 Inform herself/himself of relevant previous research;
 - 1.3 Develop a scientific plan of research which specifies the objectives of the project, takes into account previous relevant research, employs a suitable methodology, and provides for economical use of the resource base (whether such base consists of an excavation site or of specimens), consistent with the objectives of the project;
 - 1.4 Ensure the availability of adequate staff and support facilities to carry the project to completion, and to adequate curatorial facilities for specimens and records;
 - 1.5 Comply with all legal requirements, including, without limitation, obtaining all necessary governmental permits and necessary permission from, landowners or other persons;
 - 1.6 Determine whether the project is likely to interfere with the program or projects of other scholars and if there is such a likelihood, initiate negotiations to minimise such interference.
2. In conducting research, the archaeologist must follow her/his scientific plan of research, except to the extent that unforeseen circumstances warrant its modification.
3. Procedures for field survey or excavation must meet the following minimal standards:
 - 3.1 If specimens are collected, a system for identifying and recording their provenances must be maintained.
 - 3.2 Uncollected entities such as environmental or cultural features, depositional strata, and the like, must be fully and accurately recorded by appropriate means and their location recorded.
 - 3.3 The methods employed in data collection must be fully and accurately described. Significant stratigraphic and/or associational relationships among artefacts, other specimens, and cultural and environmental features must also be fully and accurately recorded.
 - 3.4 All records should be intelligible to other archaeologists. If terms lacking commonly held references are used, they should be clearly defined.

- 3.5 Insofar as possible the interest of other researchers should be considered. For example, upper levels of a site should be scientifically excavated and recorded whenever feasible, even if the focus of the project is on underlying levels.
4. During accessioning, analysis, and storage of specimens and records in the laboratory, the archaeologist must take precautions to ensure the correlations between the specimens and the field records are maintained, so that provenance, contextual relationships, and the like are not confused or obscured.
5. Specimens and research records resulting from a project must be deposited or placed under the control of an institution with permanent curatorial facilities.
6. The archaeologist has responsibility for appropriate dissemination of the results of her/his research to the appropriate constituencies with reasonable dispatch.
 - 6.1 Results viewed as significant contributions to substantive knowledge of the past or to advancements in theory, method, or technique should be disseminated to colleagues and other interested persons by appropriate means, such as publications, reports at professional meetings, or letters to colleagues.
 - 6.2 Requests from qualified colleagues for information on research results ordinarily should be honoured, if consistent with the researcher's prior rights to publications and with her/his other professional responsibilities.
 - 6.3 Failure to complete a full scholarly report within 10 years after completion of a project shall be construed as a waiver of an archaeologist's right to primacy with respect to analysis and publication of the data. Upon expiration of such 10 year period, or at such earlier time as the archaeologists shall determine not to publish the results, such data should be made fully accessible for analysis and publication to other archaeologists.
 - 6.4 While contractual obligations in reporting must be respected, archaeologists should not enter into a contract which prohibits the archaeologist from including her or his own interpretations or conclusions in contractual reports, or from a continuing right to use the data after completion of the project.
 - 6.5 Archaeologists have an obligation to accede to reasonable requests for information from the news media.
7. Archaeologists have a responsibility to prevent the publication of precise site locations whenever such publication might lead to vandalism of the sites.

International Federation of Rock Art Organisations (IFRAO) Code of Ethics (full version, approved 14-7-2000)

1. Preamble

- 1(1). This Code of Ethics describes general guidelines which IFRAO recommends to its members.
- 1(2). Rock art provides a window to our collective past, helps us make sense of the present and contributes to our future. Some of it has been handed

down to us by many generations preceding us, to safeguard it for many generations to follow us. Unless we can trace our lineage directly to those who created the rock art and have retained aspects of its original cultural context, it does not belong to us in any way.

- 1(3). The cultural significance of a rock art site is embodied in the entire fabric of the site, in addition to the actual art present; in the traditional use of the place and the activities that occurred there; and in the meanings and intangible qualities of the place.
- 1(4). Understanding the cultural significance of a place is fundamental to its care, and where such understanding is inadequate, any interference may be regarded as inappropriate.
- 1(5). The 'patina of history' apparent in the fabric of a rock art site is important evidence and forms an integral part of that fabric. It includes natural or artificial changes or traces.

2. Definitions

Fabric. All physical aspects of a rock art site, including accretionary deposits, the art itself, traces of later human responses, modifications, even traces of vandalism in cases, lichen, and so forth.

Geomorphic exposure. Any rock surface.

Graffiti. Collective term describing recent anthropic graphic markings or inscriptions that are incompatible with the known or presumed uses of the rock art on the same panels.

IFRAO. The International Federation of Rock Art Organisations.

Indigenous cultural custodians. Descendants of people who created rock art, who are obligated by their cultural traditions or beliefs to act as the custodians or curators of rock art.

Management. administrative control over the management of rock art sites, including preservation, access control, public presentation.

Massive intervention. Significant changes to the environmental conditions under which the rock art survives. This includes housing in a building, or removal of the supporting bedrock to another location.

Members. The members of IFRAO.

Peer approval. The approval of an action or proposed action by relevant specialists who have no pecuniary involvement in the project in question.

Rock art. The surviving graphic markings of cultural activities found on rock surfaces.

Triumvirate of IFRAO. The ruling council of IFRAO, consisting of the immediate past president, president and incoming president.

Traditional owners. See Indigenous cultural custodians.

3. Issues of Ownership

- 3(1). Traditional owners and indigenous cultural custodians: In areas where indigenous peoples live whose lifestyles and beliefs continue traditions associated with rock art, members recognise their ownership of the sites, and all research, conservation or management of such sites are subject to

the full approval of the traditional owners. In areas where such indigenous peoples and traditions are no longer present, members shall endeavour to understand and promote management practices consistent with such beliefs in so far as they are known from ethnographic or archaeological evidence. In the absence of such evidence to the contrary, provisional concepts of such beliefs (e.g. non-human sources of authority, nature of the sacred, non-linear time/space) should be projected from similar societies and traditions elsewhere.

- 3(2). Local antiquities and cultural heritage laws: Members shall abide by all local, state or national laws protecting archaeological sites and monuments, and comply with heritage protection laws generally.
 - 3(3). Non-traditional ownership of sites: Members shall respect the rules, laws or requests of any individuals or organisations possessing legal ownership of the land rock art sites are located on, or the land that must be traversed in order to reach the sites.
 - 3(4). Copyright and ownership of records: In regions where traditional indigenous owners exist, they possess copyright of the rock art designs. Members wishing to reproduce such designs shall make appropriate applications. Records made of rock art remain the cultural property of the rock artists, or collectively of the societies these lived amongst.
4. Recording of Rock Art
- 4(1). Methods of recording: Members shall not physically interfere with rock art except as provided in Clauses 5(2) and 6. No substances shall be applied to rock art for recording purposes, except substances that are regularly applied to individual panels by natural processes (e.g. water at open air sites).
 - 4(2). Coverage of recording: All recordings of rock art are incomplete. Therefore rock art recordings need to be as comprehensive as possible, and by multi-disciplinary means.
 - 4(3). Conduct at sites: New uses of sites, including for purposes of research, shall not change the fabric of a site, and shall respect associations and meanings of the site and its contents.
 - 4(4). Conduct in foreign countries: In addition to other requirements listed herein, researchers working in foreign countries shall do so in consultation with the region's rock art organisation, and shall provide copies of reports and publications to that organisation.
5. Removal of Samples
- 5(1). Archaeological research: No excavation shall be undertaken at a rock art site unless it forms part of an appropriately authorised archaeological research project. This includes the removal of any sediment to uncover rock art images. Similarly, no archaeological surface remains shall be removed or relocated.
 - 5(2). Sampling of rock art and adjacent geomorphic exposures: No samples shall be removed of paint residue, accretionary deposits of any kind, or

of the support rock, except after the following requirements have been satisfied:

- (a) The sample removal is to form part of a larger and specific research design that has peer approval.
- (b) The sample removal has been approved in writing by two peer researchers (i.e. scientists specialising in the analytical study of rock art).
- (c) The funds necessary for the best possible analytical laboratory support have been secured.
- (d) The analyst has extensive first-hand experience in sampling geomorphic surfaces.
- (e) Traditional indigenous custodians, where they have jurisdiction, have approved the sample removal.
- (f) The relevant local or national authorities have approved the sample removal.

5(3). *Excavation*: No excavations shall be undertaken at a rock art site unless the expertise of identifying rock art-making tools is available to the researchers proposing such excavation.

6. Conservation

6(1). *Setting*. The area around a rock art site, its setting, may contain features associated with the rock art and other evidence of its history. The visual, historical and other relationships between a site and its setting which contribute to its significance shall be retained in all conservation or preservation work.

6(2). *Site fabric*. In all conservation, preservation or management work at and near rock art sites, the visual, historical and scientific significance of the site fabric shall be retained. The removal or palliation of 'graffiti' shall be undertaken only after approval of the relevant authorities, and be effected only under the guidance of qualified rock art conservators. Massive intervention is to be reserved for situations of extreme threats to rock art, and shall be undertaken only after extensive peer review and approval.

6(3). *Protection*. Members will not disclose the locations of non-public and unprotected rock art sites to the general public. Ultimately, the best protection will depend on the awareness of the general public of the value of rock art. Part of any conservation effort should include the education of the public towards respect for rock art wherever it occurs.

7. Disputes

7(1). *Conduct*. Members shall endeavour to treat other members in a courteous manner. In regions where traditional indigenous owners exist, members shall ensure that they are kept informed about all aspects of research work, and that copies of completed reports are made available to them. Where such reports appear in technical jargon, ordinary-language versions are to be made available.

7(2). *Plagiarism*. Members shall acknowledge the use of other researcher's recordings, published comments and ideas.

- 7(3). *Dispute settlement.* Members shall make every endeavour to settle disputes among themselves, as IFRAO is reluctant to settle disputes among its members. Where a dispute cannot be settled and threatens the integrity of IFRAO, application for arbitration shall be made to the President of IFRAO, providing the relevant documentation. The dispute will then be arbitrated by the Triumvirate of IFRAO if its resolution is urgent, but preferably at the subsequent General Meeting of IFRAO.

World Archaeological Congress

The Vermillion Accord was adopted in 1989 at the South Dakota WAC Inter-Congress.

The Vermillion Accord on Human Remains

1. Respect for the mortal remains of the dead shall be accorded to all, irrespective of origin, race, religion, nationality, custom and tradition.
2. Respect for the wishes of the dead concerning disposition shall be accorded whenever possible, reasonable and lawful, when they are known or can be reasonably inferred.
3. Respect for the wishes of the local community and of relatives or guardians of the dead shall be accorded whenever possible, reasonable and lawful.
4. Respect for the scientific research value of skeletal, mummified and other human remains (including fossil hominids) shall be accorded when such value is demonstrated to exist.
5. Agreement on the disposition of fossil, skeletal, mummified and other remains shall be reached by negotiation on the basis of mutual respect for the legitimate concerns of communities for the proper disposition of their ancestors, as well as the legitimate concerns of science and education.
6. The express recognition that the concerns of various ethnic groups, as well as those of science are legitimate and to be respected, will permit acceptable agreements to be reached and honoured.

World Archaeological Congress First Code of Ethics

Principles to Abide By:

Members agree that they have obligations to indigenous peoples and that they shall abide by the following principles:

1. To acknowledge the importance of indigenous cultural heritage, including sites, places, objects, artefacts, human remains, to the survival of indigenous cultures.
2. To acknowledge the importance of protecting indigenous cultural heritage to the well-being of indigenous peoples.

3. To acknowledge the special importance of indigenous ancestral human remains, and sites containing and/or associated with such remains, to indigenous peoples.
4. To acknowledge that the important relationship between indigenous peoples and their cultural heritage exists irrespective of legal ownership.
5. To acknowledge that the indigenous cultural heritage rightfully belongs to the indigenous descendants of that heritage.
6. To acknowledge and recognise indigenous methodologies for interpreting, curating, managing and protecting indigenous cultural heritage.
7. To establish equitable partnerships and relationships between Members and indigenous peoples whose cultural heritage is being investigated.
8. To seek, whenever possible, representation of indigenous peoples in agencies funding or authorising research to be certain their view is considered as critically important in setting research standards, questions, priorities and goals.

Rules to Adhere to:

Members agree that they will adhere to the following rules prior to, during and after their investigations:

1. Prior to conducting any investigation and/or examination, Members shall with rigorous endeavour seek to define the indigenous peoples whose cultural heritage is the subject of investigation.
2. Members shall negotiate with and obtain the informed consent of representatives authorised by the indigenous peoples whose cultural heritage is the subject of investigation.
3. Members shall ensure that the authorised representatives of the indigenous peoples whose culture is being investigated are kept informed during all stages of the investigation.
4. Members shall ensure that the results of their work are presented with deference and respect to the identified indigenous peoples.
5. Members shall not interfere with and/or remove human remains of indigenous peoples without the express consent of those concerned.
6. Members shall not interfere with and/or remove artefacts or objects of special cultural significance, as defined by associated indigenous peoples, without their express consent.
7. Members shall recognise their obligation to employ and/or train indigenous peoples in proper techniques as part of their projects, and utilise indigenous peoples to monitor the projects.

The new Code should not be taken in isolation; it was seen by Council as following on from WAC's adoption of the Vermillion Accord passed in 1989 at the South Dakota Inter-Congress.

World Archaeological Congress

The Tamaki Makau-rau Accord was drafted in 2005 at the WAC Inter-Congress in Auckland, New Zealand and adopted in 2006 at the Inter-Congress in Osaka, Japan.

The Tamaki Makau-rau Accord on the Display of Human Remains and Sacred Objects

In recognition of the principles adopted by the Vermillion Accord, the display of human remains and sacred objects is recognised as a sensitive issue. Human remains include any organic remains and associated material. Sacred objects are those that are of special significance to a community. Display means the presentation in any media or form of human remains and sacred objects, whether on a single occasion or on an ongoing basis, including conference presentations or publications. Community may include, but is not limited to, ethnic, racial, religious, traditional or Indigenous groups of people.

WAC reiterates its commitment to scientific principles governing the study of the human past. We agree that the display of human remains or sacred objects may serve to illuminate our common humanity. As archaeologists, we believe that good science is guided by ethical principles and that our work must involve consultation and collaboration with communities. The members of the WAC council agree to assist with making contacts within the affected communities.

Any person(s) or organisation considering displaying such material or already doing so should take account of the following principles:

1. Permission should be obtained from the affected community or communities.
2. Should permission be refused that decision is final and should be respected.
3. Should permission be granted, any conditions to which that permission is subject should be complied with in full.
4. All display should be culturally appropriate.
5. Permission can be withdrawn or amended at any stage and such decisions should be respected.
6. Regular consultation with the affected community should ensure that the display remains culturally appropriate.

Appendix 3

Converting Between Metric and Non-Metric Systems

Conversion chart: imperial to metric measurements

	Imperial	Metric
Distance	1 mile	1.6 km
	1 nautical mile	1.85 km
Length	1 inch	2.5 cm
	1 foot	30 cm
	1 yard	0.90 m
Mass	1 ton	1.01 tonne
Weight	1 ounce	28 g
	1 pound	454 g
	1 stone	6.3 kg
Liquid measures	1 fluid ounce	28 ml
	1 pint	568 ml
	1 gallon (8 pints)	4.55 l
Area	1 acre	0.4 ha
	1 sq mile	2.6 sq km

Conversion chart: metric to imperial measurements

	Metric	Imperial
Distance	1 km	0.6 mile
Length	1 cm	0.4 inch
	1 m	1.1 yard
Mass	1 tonne	0.98 ton
Weight	1 gm	0.04 ounce
	1 kg	2.2 pounds
Liquid Measures	1 ml	0.0352 fl oz
	1 l	1.76 pints
Area	1 ha	2.47 acres
	1 km ²	0.386 sq mile or 247 acres

Temperature conversion chart: fahrenheit to celsius

Fahrenheit	Celsius
32	0 (Freezing)
41	5
50	10
59	15
68	20
77	25
86	30
95	35
104	40
113	45

Appendix 4

Sample Consent Forms

Consent for Photographs

Name (Please Print): Ordinary Person
 Address: 24 Jawoyn Street
Remote Aboriginal Community, NT 0888
 Telephone: (08) 89999999

I agree to be photographed and consent to the use of photographs for the following specified purpose(s):

- | | | |
|---|---|---|
| • Inclusion in a journal or magazine article or book. | √ | √ |
| • Inclusion in an unpublished report. | √ | √ |
| • Inclusion in a pamphlet or poster. | √ | √ |
| • Placement on the <u>Ordinary</u> web site. | √ | √ |
- (Please circle)

I understand that—

- (a) Where the photograph is to be placed on a website I may ask for its removal if I wish.
- (b) That I will be paid \$100 for each photograph that is published, each time it is used.
- (c) That I will see the photograph in context (i.e. as page proofs) before it is published.
- (d) That I will be provided with a copy of the publication.
- (e) That I am giving consent for use on 1 occasion(s), and that consent will be re-sought for any re-publication of this image, or publication of this image in any other venue.

Signature: Ordinary Person Date: 10/10/2006

Where the person to be photographed is a child, the child's parent or guardian should sign below:

Name of parent or guardian: _____
 Address: _____

 Telephone: _____
 Signature parent: _____ Date: _____
 or guardian

Ms Awesome Archaeological Photographer
 Address: Dept of Archaeology, Flinders University, GPO Box 2100, Adelaide, South Australia.
 Phone: (08) 8201 3911

Consent for Interview

Name (Please Print): Ordinary Person
 Address: 24 Jawoyn Street
Remote Aboriginal Community, NT 0888
 Telephone: (08) 89999999

I agree to be interviewed for the following specified purpose(s):

- Inclusion in a journal or magazine article or book. ✓ ✓
- Inclusion in an unpublished report. ✓ ✓
- Inclusion in a pamphlet or poster. ✓ ✓
- Placement on the *Ordinary* web site. ✓ ✓

(Please circle)

I acknowledge that--

- (a) I have read the information provided.
- (b) Details of procedures and any risks have been explained to my satisfaction.
- (c) I am agreeing to my information and participation being recorded on tape/videotape/digital media.
- (d) I should retain a copy of the Information Sheet and Consent Form for future reference.

I understand that--

- (a) I may not directly benefit from taking part in this research unless a fee for payment of this interview has already been negotiated.
- (b) I am free to withdraw from the project at any time and am free to decline to answer particular questions.
- (c) I may ask that the recording/observation be stopped at any time, and that I may withdraw at any time from the session or the research without disadvantage.

While the information gained in this study will be published as explained, I will not be identified, unless it is my wish to be identified, in which case permission will be sought in context (i.e. I will see drafts and/or proofs of publications) and individual information will remain confidential.

I have been assured that the researcher will not disclose any information that is confidential or restricted to this community and that I will be given a copy of any recorded material and any transcripts. I have also been assured that the researcher will seek permission for publication of images and other material.

Signature: Ordinary Person Date: 10/10/2006

I certify that I have explained the study to the volunteer and consider that she/he understands what is involved and freely consents to participation.

Signature: Ordinary Researcher Date: 10/10/2006

Mr Ordinary Archaeological Researcher
 Address: Dept of Archaeology, Flinders University, GPO Box 2100, Adelaide, South Australia.
 Phone: (08) 82013911

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